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1. Cronheim, G., and Toekes, I.M.: Comparison of Sedative Properties of Single Alkaloids of Rauwolfia and Their Mixtures, Meeting of the American Society for Pharmacology and Experimental Therapeutics, Iowa City, Iowa, Sept. 5, 1955.

2. Moyer, J.H.; Dennis, E., and Ford, R.: Drug Therapy (Rauwolfia) of Hypertension. II. A Comparative Study of Different Extracts of Rauwolfia When Each Is Used Alone (Orally) for Therapy of Ambulatory Patients with Hypertension, A.M.A. Arch. Int. Med. *96*:530 (Oct.) 1955.

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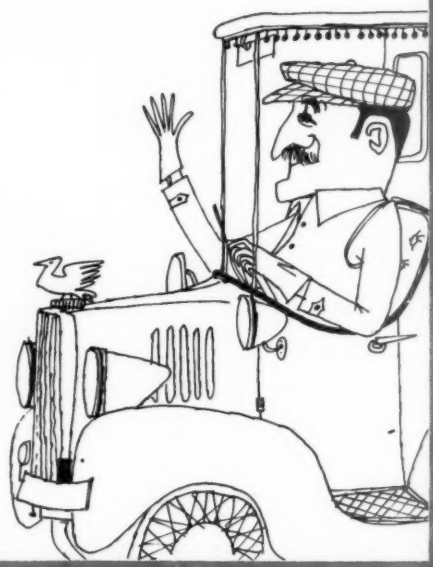

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JOURNAL OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION is published monthly by the American Medical Women's Association, Inc., at 136 4th Ave., North, Nashville 3, Tenn. Entered as second class matter at the Post Office at Nashville, Tennessee, under the Act of August 24, 1912. Acceptance for mailing at special rates of postage provided for in Section 1102, Act of October 8, 1917, and authorized July 15, 1918.

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Subscription, $5.00 per year; $1.00 single copy.
EDITORIAL AND ADVERTISING OFFICE, Journal of the American Medical Women's Association, 1790 Broadway, New York 19, N. Y. Telephone Judson 6-8683. Advertising Manager, Joseph Bourgholtzer, Box 281, Suffern, N. Y. Telephone Cragmere (N.J.) 8-3870.

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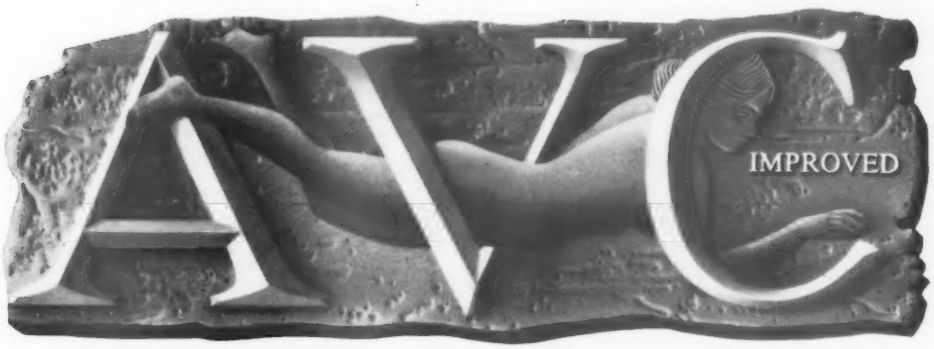

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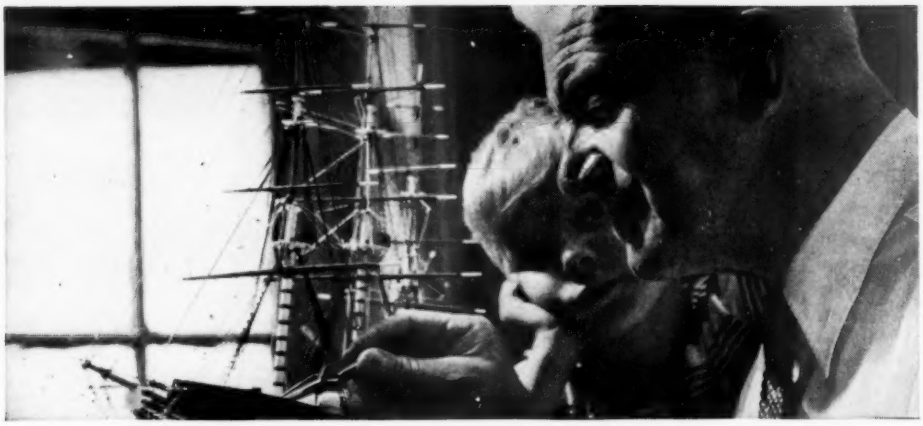

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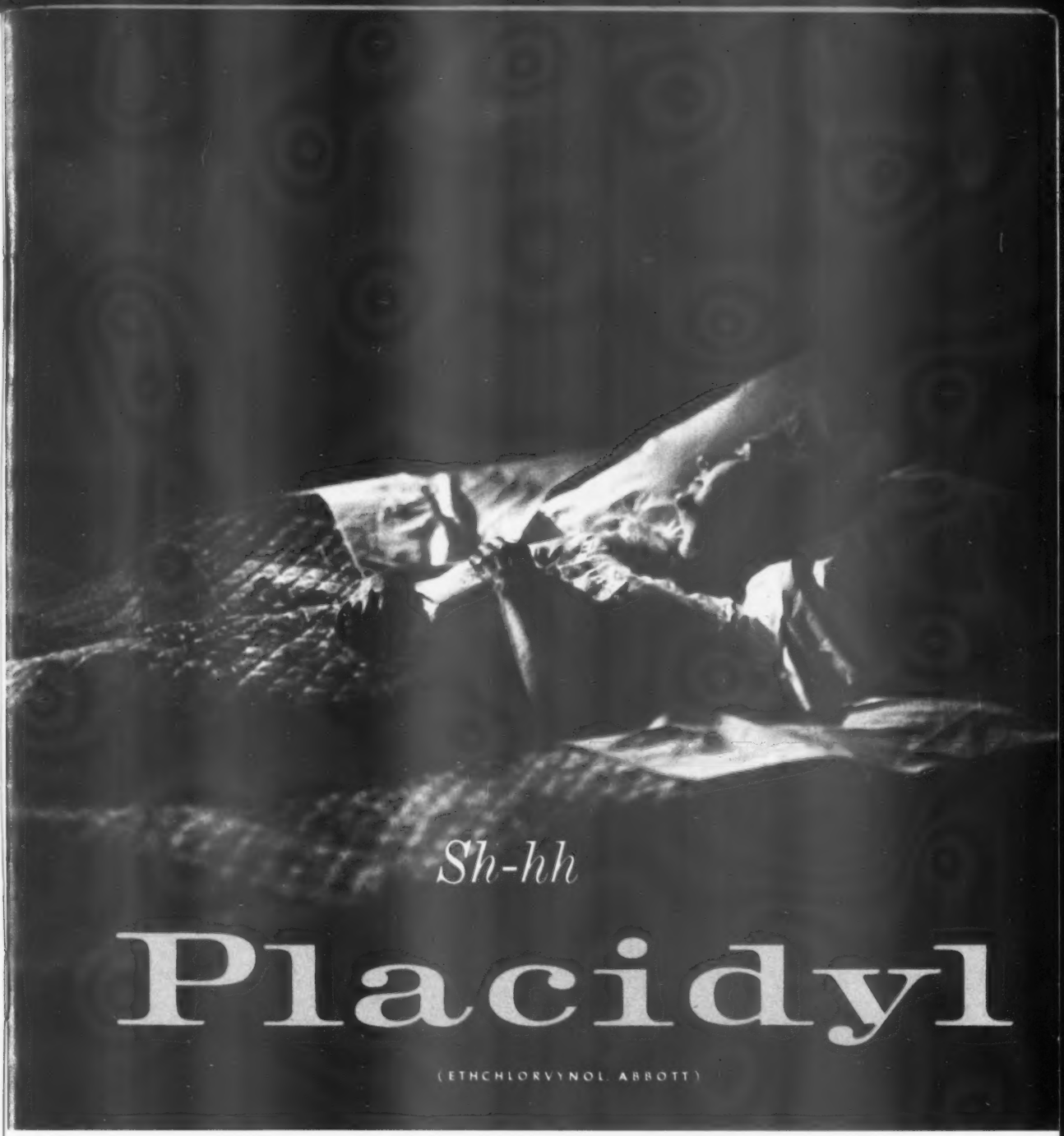

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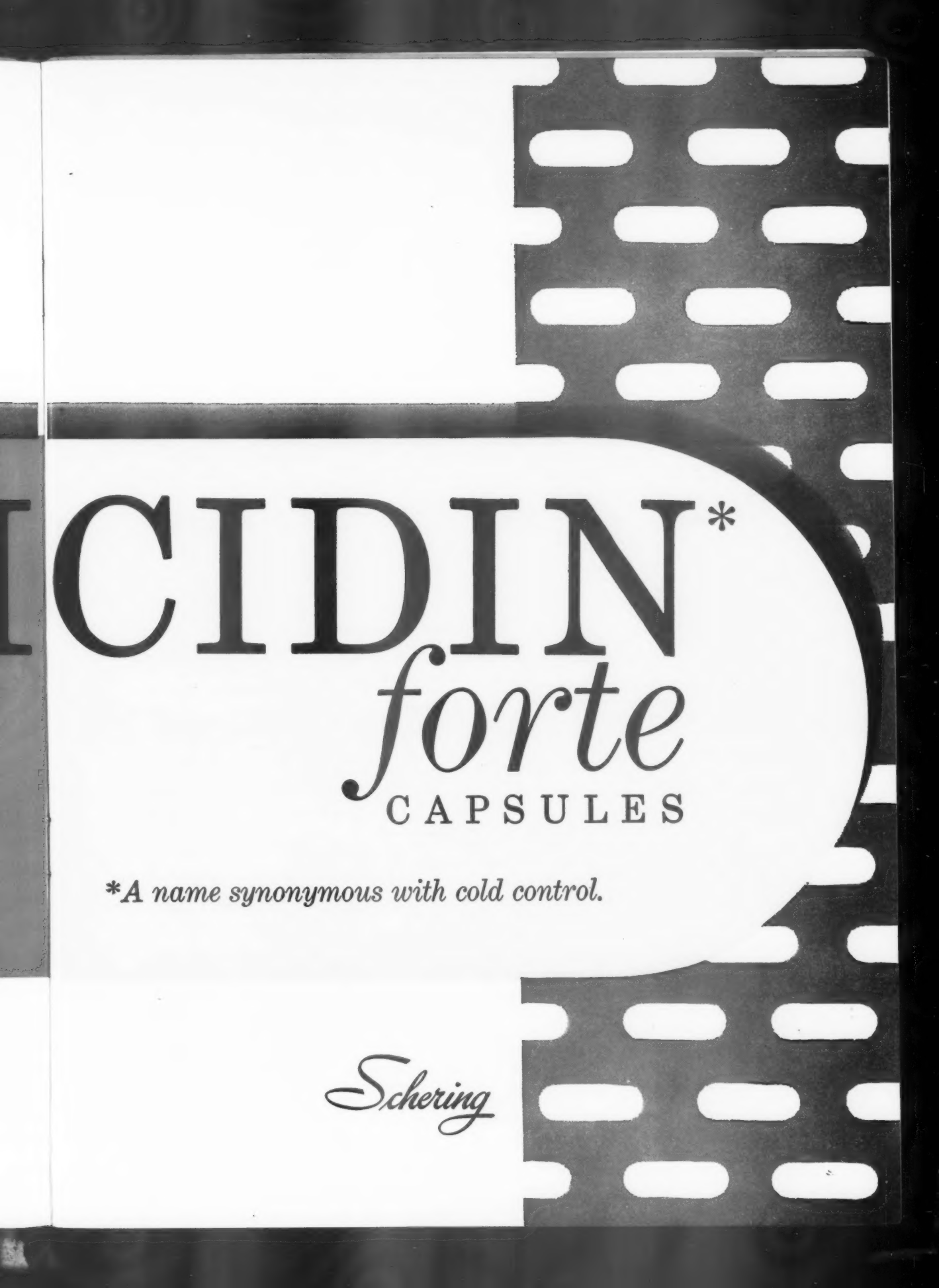
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(Continued on page 20)

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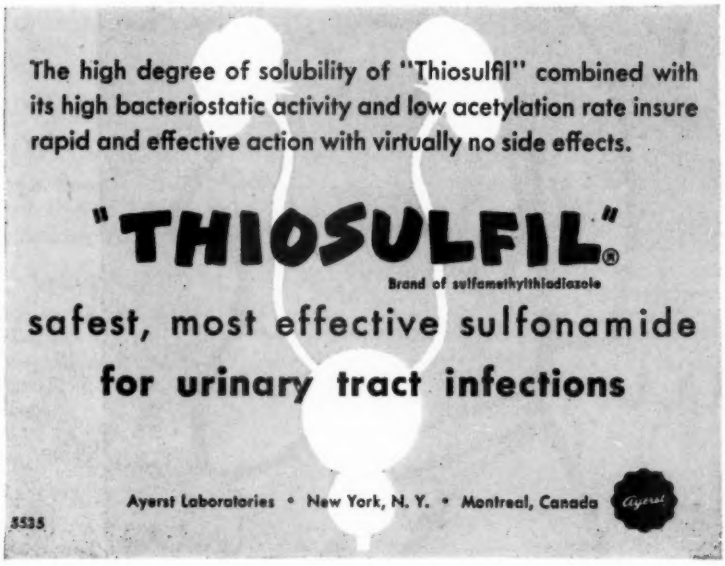
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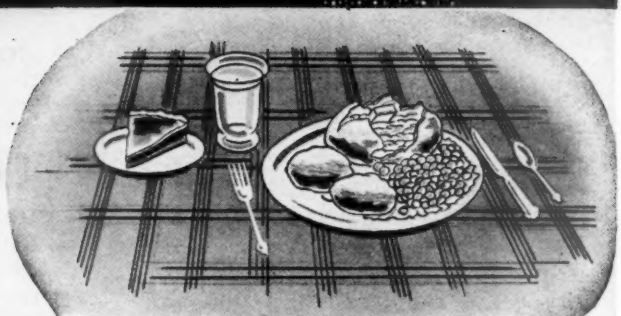

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College .....Graduation year .....
Graduate study .....Further degrees .....
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Organizations to which you belong .....Dates .....
Offices held .....
Institutions with which you are, or have been associated.....
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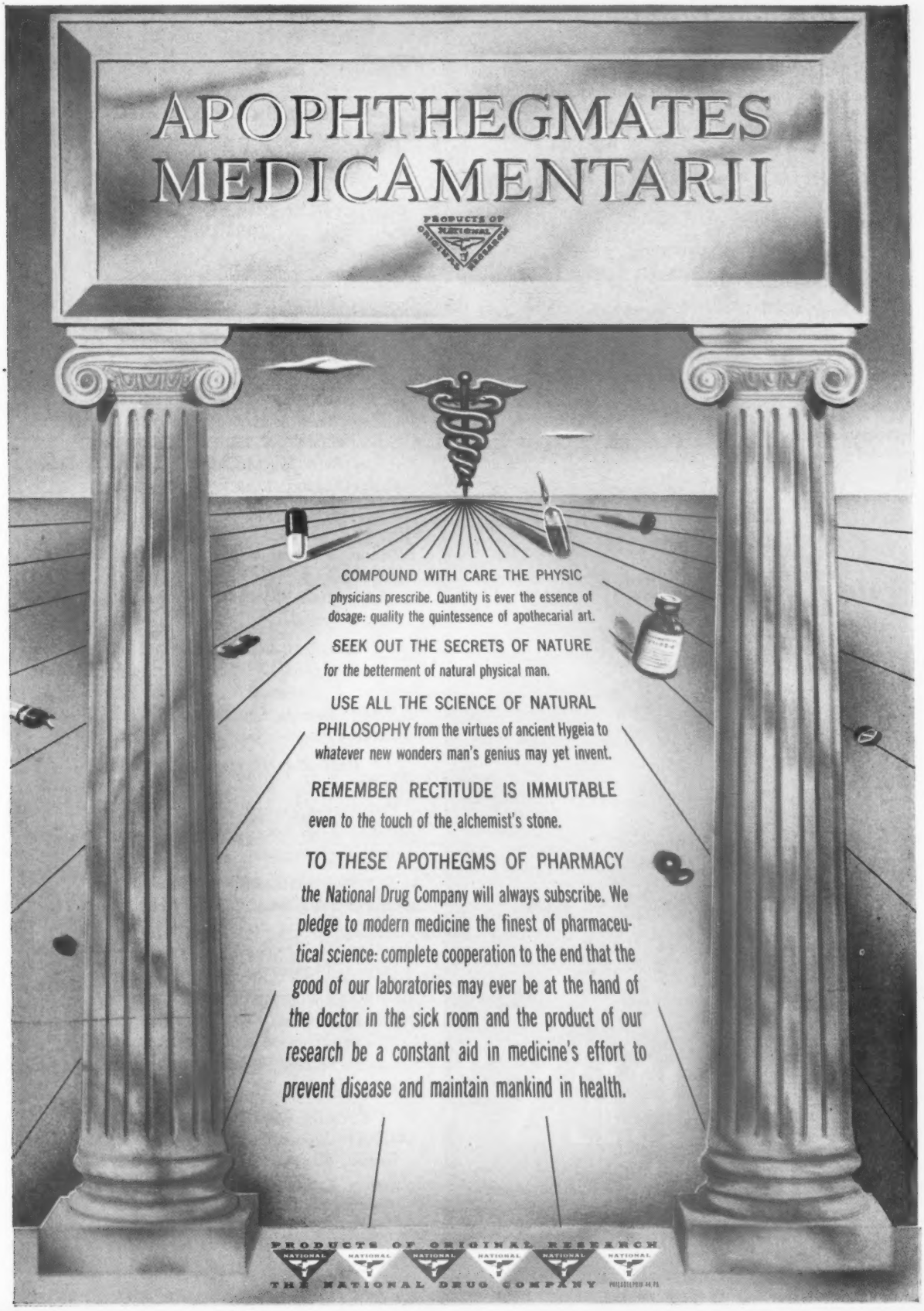
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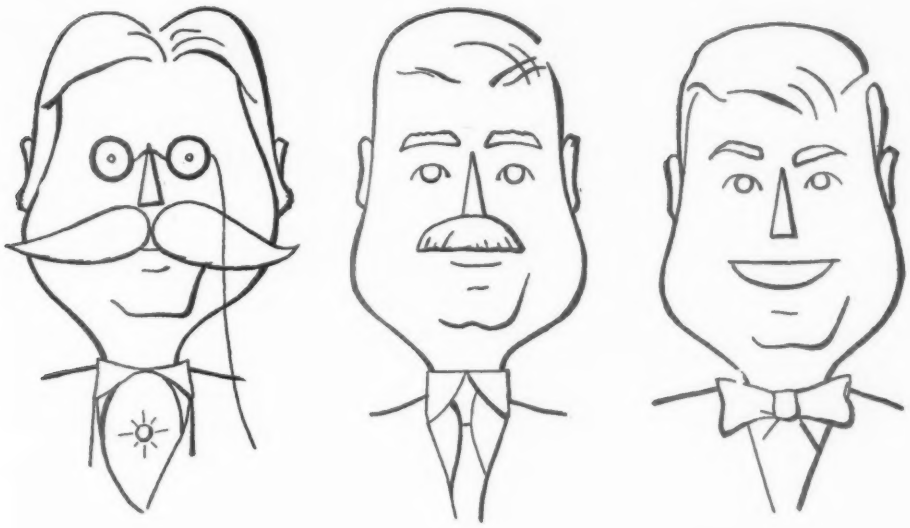

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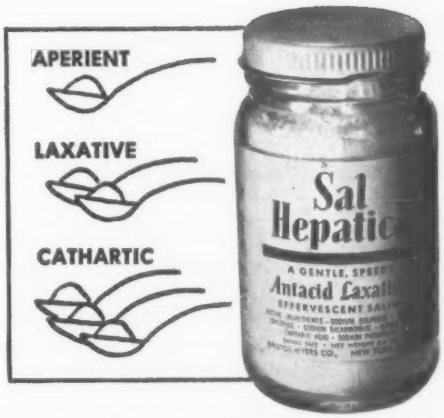

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Journal of the
AMERICAN MEDICAL WOMEN'S ASSOCIATION

VOLUME 11 JANUARY 1956 NUMBER 1

Growth Following Castration in Two Adolescent Girls

Leona M. Bayer, M.D.

So dramatic an injury as castration in early adolescence is generally expected to have important effects on a young girl's subsequent development. Fortunately, this is a trauma which is exceedingly rare; surprisingly, no published records of serial measurements delineate the growth effects of this critical loss.

Observations on the two cases presented here were made possible by the co-operation of the patients, as well as of several departments of the Stanford University School of Medicine: Pediatrics, Surgery, Gynecology, and Medicine; to all of these I am most grateful for permission to publish the data.

The similarities and contrasts between the cases make them an interesting pair. The cases are alike in that at the time of castration neither girl had menstruated; they were within one year of each other in age; at the first subsequent measurement they were within 1.1 inch of each other in height, and at maturity within 1 inch. They differ in that one was treated by roentgen ray to the spine, which only incidentally involved the ovaries, the other by direct surgery; one received no endocrine treatment, the other received cyclic stilbestrol.

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Long-time observations, beside showing similarity in eventual height, show certain clear contrasts in development.

These two longitudinal records thus offer some tentative answers to the questions: What happens to an adolescent girl who loses her ovaries? Does she become a giant? Does she mature sexually? What does replacement therapy do? They also demonstrate that repeated morphologic observations on growing patients can contribute certain insights to the total understanding of the growth process, which laboratory and clinical studies alone cannot provide.

Although each of these cases warrants a detailed clinico-pathologic report, reference will be made only to material which illuminates the basic growth data. Since the primary diagnoses were so grave in both girls, no attention was focused on their growth until confidence was established in their continued survival and health. The early growth observations are thus somewhat spotty in both instances, and are supplemented by a judicious guess as to the probable skeletal status at the time of the first stature measurements (see following).

The growth evaluation methods demonstrated are in regular use in the Stanford Endocrine Clinic and are currently being collected in a clinicians' handbook. Wherever charts are not self-explanatory, a brief interpretation and/or references are inserted when they are first introduced in Case A.

Case Report A

Clinical Summary. This patient has been under observation for over twenty years. When originally seen at age 13 years 1 month, she complained of inability to walk during the past three and one-half months. A diagnosis of malignant neoplasm (Ewing's sarcoma) of the fourth lumbar vertebra was confirmed by biopsy. Two series of treatments with deep roentgen ray therapy resulted in a cure of the tumor.

That the radiation also resulted in castration is signified by the fact that the patient failed to mature sexually. The absence of ovarian function is supported by scattered laboratory observations. Series of measurements of blood estrogen at ages 16 and 17 years were consistently minimal. A measurement of urinary excretion of follicle stimulating hormone at age 32 was still at the castrate level. At age 25, 17-ketosteroid output was at the average female level, and at a low normal level at age 32.

Except for a six months period with cyclic stilbestrol, just preceding her eighteenth birthday, no hormones were given.

A first growth evaluation was made when the girl was 16 years and 4 months old.

Anthropometric Values and Deviation Chart. A deviation chart is a device for comparing the anthropometric data from a given child with a set of norms which are appropriate for his sex, age, and racial origins. In the charts used here, about two thirds of measurements of normal children would fall close to the mean, within the two center columns (plus or minus one standard deviation). The next adjacent columns (plus or minus two standard deviations) would include 96 percent of normal characteristics. Almost all normal values would fall within the outer borders of the chart (plus or minus three standard deviations). A profile drawn for an individual, by reference to appropriate standards, gives a more vivid impression of the status of that child than is gained by a tabular comparison of his measures with the norms.

Measures are remarkable only in the short sitting height which shows up both absolutely and in the small Si/S (sitting height/stature) indicating a long-legged build.

Secondary Sex Characters. At the age 16 years 4 months, there was no menarche, and no development of breasts. Pubic and axillary hair was at the stage most frequently reached at age 11.

In her seventeenth year, this girl was thus essentially preadolescent with regard to secondary sexual development, except for the appearance of pubic hair.

Skeletal Age. Skeletal age was presumably normal. However, films were not available until age 18, and will therefore be discussed under Longitudinal Growth Data. All the patient's films were read against Greulich-Pyle Standard.[1]

Height Prediction. Predictions concerning probable further growth depend on the skeletal readings just mentioned. They are made according to the tables of Bayley and Pinneau.[2]

Growth Diagnosis. The patient was long-legged with hypogonadal build. She showed a retarded sexual maturation.

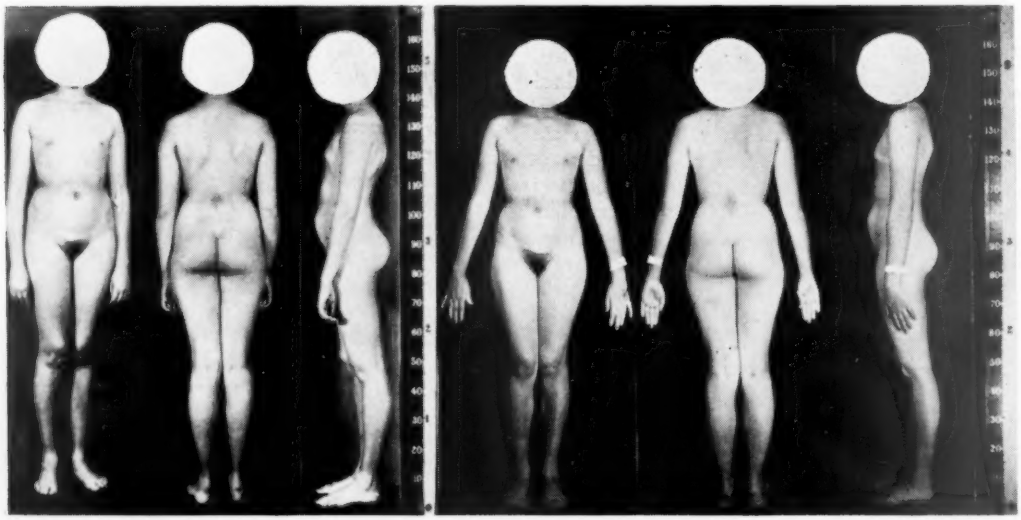
Serial Anthropometric Measures. Serial anthropometric measurements emphasize the relative failure in trunk growth in that the Si/S and the BC/S (bicristal/stature) tend to grow progressively smaller.

Longitudinal Growth Data. Table I provides the essential longitudinal growth data from which subsequent charts are drawn.

Bayley Stature and Increment Curve.[3] From the first height observation at 13 years 5 months, to age 17, the stature curve follows, with astonishing conformity, the curve for girls maturing at average rates. From there on, it differs in that it continues to rise a little for at least three years longer.

The increment curve reflects this continued growth by the delayed return to O.

Stature predictions are added to this graph. They are on solid ground only at ages 18, 19, and 20, when hand roentgenographic films are available. However,



Left. Case A. Age 16 years 4 months. Right. Case A. Age 18 years 11 months.

there is no reason to assume that there was any growth or maturation failure, prior to castration at age 13 years 1 month. It therefore seems reasonable to assume, from the internal evidence in the record, that at 13 years 5 months the bone age was still at 13 years 1 month. If this assumption is granted, it appears that the girl grew only 1.6 inches more than would have been expected in a normal girl in her fourteenth year. Later data show that the growth falls an inch short of what would be expected from the almost stationary skeletal status at ages 18, 19, and 20.

Androgyny Profile. An androgyny profile permits a graphic comparison of the masculine and feminine characteristics of a given individual with the body build of normal young adults of both sexes.[4]

Case A, at 18 years 11 months, shows that while secondary sexual differentiation has developed very little since the original photos, the body itself is essentially feminine, with a rating toward the hypofeminine column.

Growth Summary. Growth continued to 66.2 inches, only 1.6 inches more than anticipated, on the basis of an assumed normal skeletal age at 13 years 1 month. However, this additional height was mostly in the legs, so that the final proportions are deviant in a characteristically hypogonadal direction.

Maturation retardation is evidenced by the long lag in epiphyseal closure and by the continuation into mature years of a little girl's body form, with relatively straight contours, without breast development, and with relatively little axillary or pubic hair.

TABLE I. LONGITUDINAL GROWTH DATA
CASE: A

Age yrs. mos.	Weight lbs. K	Stature in.	Stature cm.	Bicristal in. cm.	Skeletal Age yrs. mos.	Stature Prediction inches
13-5	81.0	62.9			13-1	65.6
13-9	88.0	63.0			(assumed)	
13-10	91.0	63.1				
14-2	93.0	63.6				
14-3	93.0	63.7				
14-5	90.0	63.7				
14-6	96.0	63.8				
14-9	101.0	64.0				
15-4	104.0	64.4				
15-7	104.0	64.4				
16-3	111.0	64.8	164.4	25.9		
17-0	110.5	65.2	165.4			
18-0	109.0	65.5	166.2		13-6	67.4
18-4	113.0		166.5			
19-0	111.0	65.8	167.1	26.4	13-9	67.3
20-0		65.8			14-0	67.1
20-5	115.0	66.0	167.5			
20-10	110.0	66.2	168.0			
33-5		66.2				

DEVIATION CHART FOR ANTHROPOMETRIC VALUES

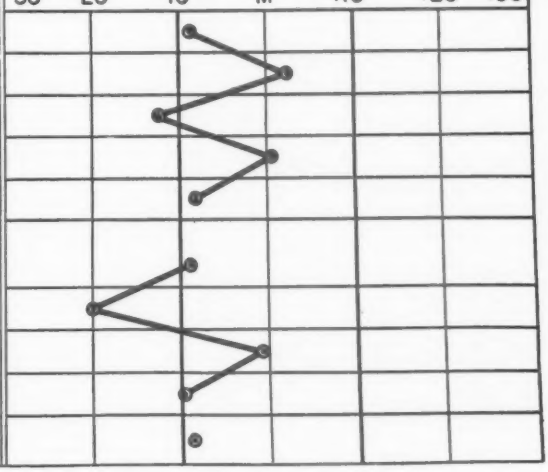
Name Case A Sex M (F) Birth Date Date Age 16-4 Case #

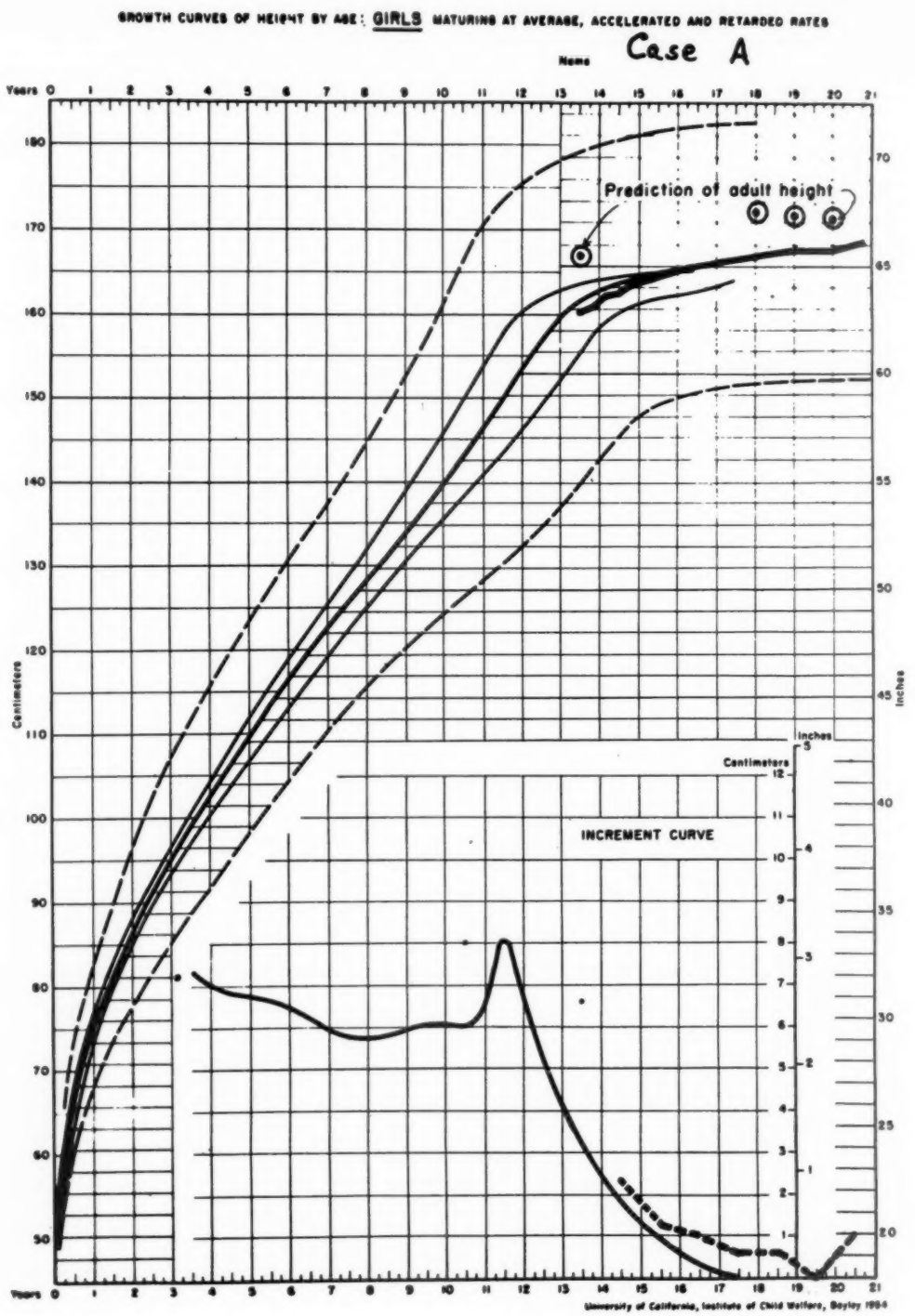
Norms for: Sex M (F) ○ Age 16 yrs. Other

MEASURE		Pounds x .454 = Kilos / Inches x 2.54 = Cm	
Weight	W	112	50.8
Stature	S	64.8	164.4
Sitting height	Si		82.3
Shoulder	BA		54.4
Pelvis	BC	10.2	25.9
		Ratios	
Above-named measurements in per cent of stature.	W/S		30.9
	Si/S		50.1
	BA/S		20.9
	BC/S		15.8
Index Trunkbreadth	BC/BA		75.3

STANDARD DEVIATION VALUES

-3σ | 2% -2σ | 16% -1σ | 50% M | 84% +1σ | 98% +2σ | +3σ




GROWTH CURVES OF HEIGHT BY AGE: GIRLS MATURING AT AVERAGE, ACCELERATED AND RETARDED RATES
Name Case A
Prediction of adult height
INCREMENT CURVE
Centimeters
Inches
Years
University of California, Institute of Child Welfare, Boyley 1954

ANDROGYNIC PATTERNS OF BODY FORM: RATING PROFILE

Bayley-Bayer Standards*
17-18 Year Norms

Name Case B | Sex M ♂ | Date | Age 19 | Skeletal Age 17-6 | Case Number

ITEM ("A" through "H" from rear-view photographs)	RATING				
	Hyper-masculine 1	**Masculine** 2	**Intermediate, A-sexual, or Bi-sexual** 3, 3a, 3b	**Feminine** 4	**Hyper-feminine** 5
I. A. **Surface modeling**	Exaggerated hardness of relief.	Strong muscle molding. Bone, vein and tendon prominences.	b. Muscular and fat. / a. Little muscle or fat.	Smooth and soft, with little muscle.	Very soft, fat, no muscle.
II. **Trunk Contours** B. Shoulder girdle	Massive.	Appears wide, heavy and muscular.	b. Muscular and fat. / a. Narrow, "bony."	Slight, soft and narrow.	Frail, softly fat.
C. Waist line	Marked torso narrowing to low waist: may have minimal indentation.	Slight indentation due to narrowing of torso.	b. Broad hip and shoulder; little indentation. / a. Slight symmetrical high concavity.	Definite line accentuated by tapering.	Marked indentation.
D. Hip flare	No widening.	Slight widening of hips from waist.	Intermediate.	Flares into wide hips laterally and posteriorly.	Marked flare.
E. Buttocks	Very flat.	Flat and angular.	Intermediate.	Rounded and full.	Very broad and rounded.
III. **Leg Patterns** F. Thigh Form	Cylinder and/or bulging muscles.	Approaches cylinder. Lateral outline convex.	Intermediate.	Funnel, fat and rounded. Lateral outline concave.	Fat, wide-top funnel.
G. Interspace (whole leg)	Very open.	Open center above and below knees.	Intermediate.	Closed center except small space below knees.	Thighs and knees together, feet apart.
H. Muscle bulge (lower leg)	Strong bulge, no fat.	Prominent inner bulge of gastrocnemius.	b. Moderate muscle bulge. / a. No muscle bulge; spindly.	Slight inner bulge; simply, smooth, outer curve.	Very little muscle, but smoothly rounded and outer curve.
J. Penis size	1 Very / 1.5 Large	2 Average	2.5 Small / 3 Very		
K. Breast size			3 Very / 3.5 Small	4 Average	4.5 Large / 5 Very
L. Body hair density	1 Heavy on thighs, etc.	2 Easily discernible	2.5 Sparse. / (3) ♂	Absent	
M. Pubic pattern	Diverse	Acuminate.	Sagittal	Horizontal ♀	
N. Bicristal / Biacromial Index 80	−−68	69 — 73	74 — 79	80 — 83	83−− +
P. Strength (Kg) Grip (R+L)+Thrust +Pull	+−344	343 — 189	188 — 148	147 — 110	109−−
Grip (R+L)	+−136	135 — 95	94 — 80	79 — 59	58−−
Androgyny Score (Sum of "A"−"H") 31.5	1 — 12	13 — 19	20 — B 25 / A	26 — 34	35 — 40
Characteristic Description (Circle one)	**Hypermasculine**	**Masculine**	**Intermediate Bisexual Asexual Disharmonious**	**Feminine**	**Hyperfeminine**

Supplementary Criteria

Notes:

Case Report B

Clinical Summary. This girl was first seen at another hospital at age 12 years 3 months. Preoperative and operative findings of abdominal swelling, lower abdominal masses, and bloody ascites led to a panhysterectomy on the presumptive diagnosis of malignant disease. Only later did microscopic examination lead to the reassuring diagnosis of theca cell tumors of the ovaries.

Laboratory confirmation of the castration was given by the typical high excretion of follicle stimulating hormone at 12 years 10 months. This level dropped steadily to normal under cyclic stilbestrol administration which was started the following month and has been continued ever since. At 16 years, the 17-ketosteroid output was low normal. At 19 years, after an experimental discontinuation of stilbestrol for a period of several months, the 17-kestosteroid excretion was still in the average female range, but the follicle stimulating hormone now registered at the level expected in castrates.

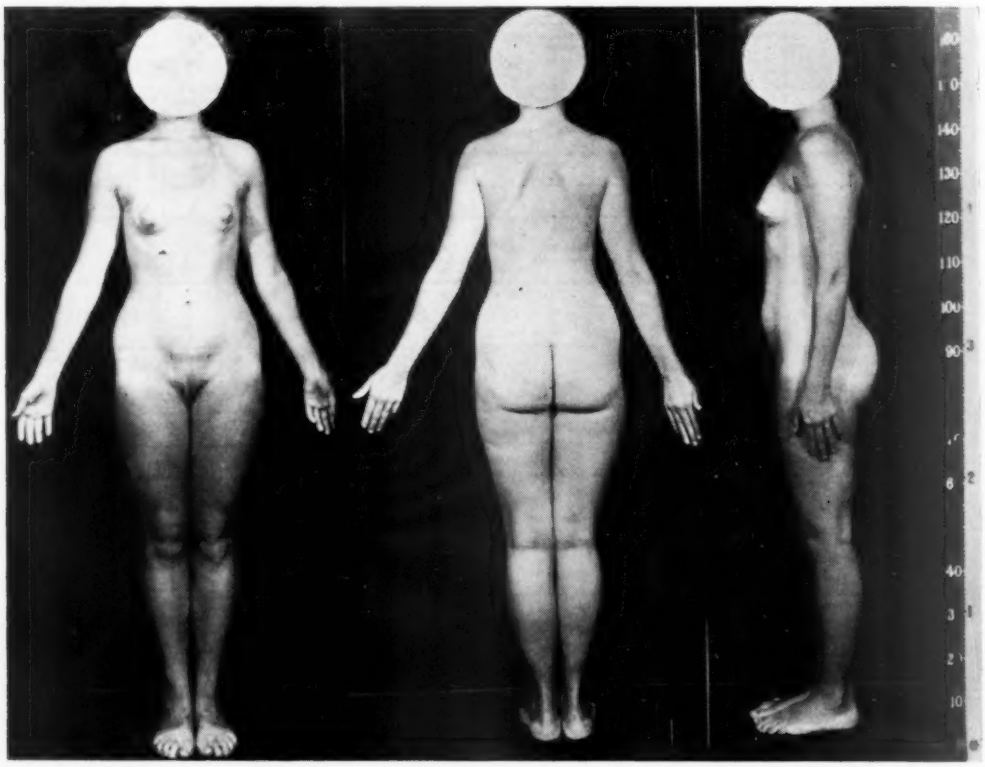
The first growth evaluation on this girl was made when she was 15 years 2 months.

Anthropometric Valuation and Deviation Chart. All measures and ratios are essentially normal, including the critical Si/S ratio. This latter ratio remained normal throughout the period of subsequent observations.

TABLE II. LONGITUDINAL GROWTH DATA

CASE: B

Age yrs. mos.	Weight lbs. K	Stature in.	Stature cm.	Bicristal in.	Bicristal cm.	Skeletal Age yrs. mos.	Stature Prediction inches
12-4	92.0	61.8				12-4	66.1
12-6	104.0	62.0				(assumed)	
12-8	111.0	63.0					
13-0	113.0	63.5					
13-5	124.0	64.5					
13-11	132.0	65.5					
14-3	134.0	65.75					
14-9	134.0	66.25					
15-2	138.0	65.5	168.7	27.9		15-0	67.2
16-0	140.0	66.7	169.3	28.1		15-6	67.2
17-3	142.0	66.9	169.7	29.1		16-9	67.0
17-10	145.0	67.0	170.0	29.4			
18-6	151.0	67.0	170.0				
19-0	156.0	67.2	170.6	29.4		17-6	67.2



Case B. Age 15 years 2 months.

Secondary Sex Characters. The age was 15 years 2 months. There was no menarche; breast developed to small mounds; there was no axillary or pubic hair.

Skeletal Age. At 15 years 2 months, this girl's skeletal age was 15 years.

Height Prediction. At 15 years 2 months, this girl's height prediction was 67.2 inches.

Growth Diagnosis. The growth diagnosis was normal adolescent except for absence of sexual hair.

Longitudinal Growth Data (See Table II).

Bayley Stature and Increment Curve. The first two stature observations lie so close to the mean for girls maturing at an average rate that it is reasonable to assume that this was indeed the pattern prior to surgery. Thereafter the curve continues an upward trend which proceeds longer and higher than the mean.

As a corollary of the continued growth, increment calculations follow a path similar to that for slow maturing girls.

Stature predictions, after the first hand roentgenogram at age 15 years 2 months, are remarkably stable and correct. Even a hypothetical prediction based on a hypothetically normal skeletal age at the first stature recording is only 1.1 inches below the adult stature attained.

Androgyny Profile. An androgyny rating at 19 years shows a remarkably normal feminine build, with only a slight deficiency of breast size and a minimal appearance of axillary and pubic hair, to fit in with the known fact of castration.

Growth Summary. Growth continued several years longer than would have been expected in a normal girl; it did not exceed the documented expectation at age 15, and only exceeded by 1.1 inches the guessed expectation at time of surgery.

An inhibition of maturation is evidenced only by the slightly deficient development of secondary sex characters. There was no significant skeletal delay until the final lag after age 17. Body form had a normal ratio of leg length to total height and thus no evidence of hypogonadal long-leggedness.

Comparison of the Two Cases

These two records indicate that in Case A, where there was uncompensated ovarian deficiency, there occurred:

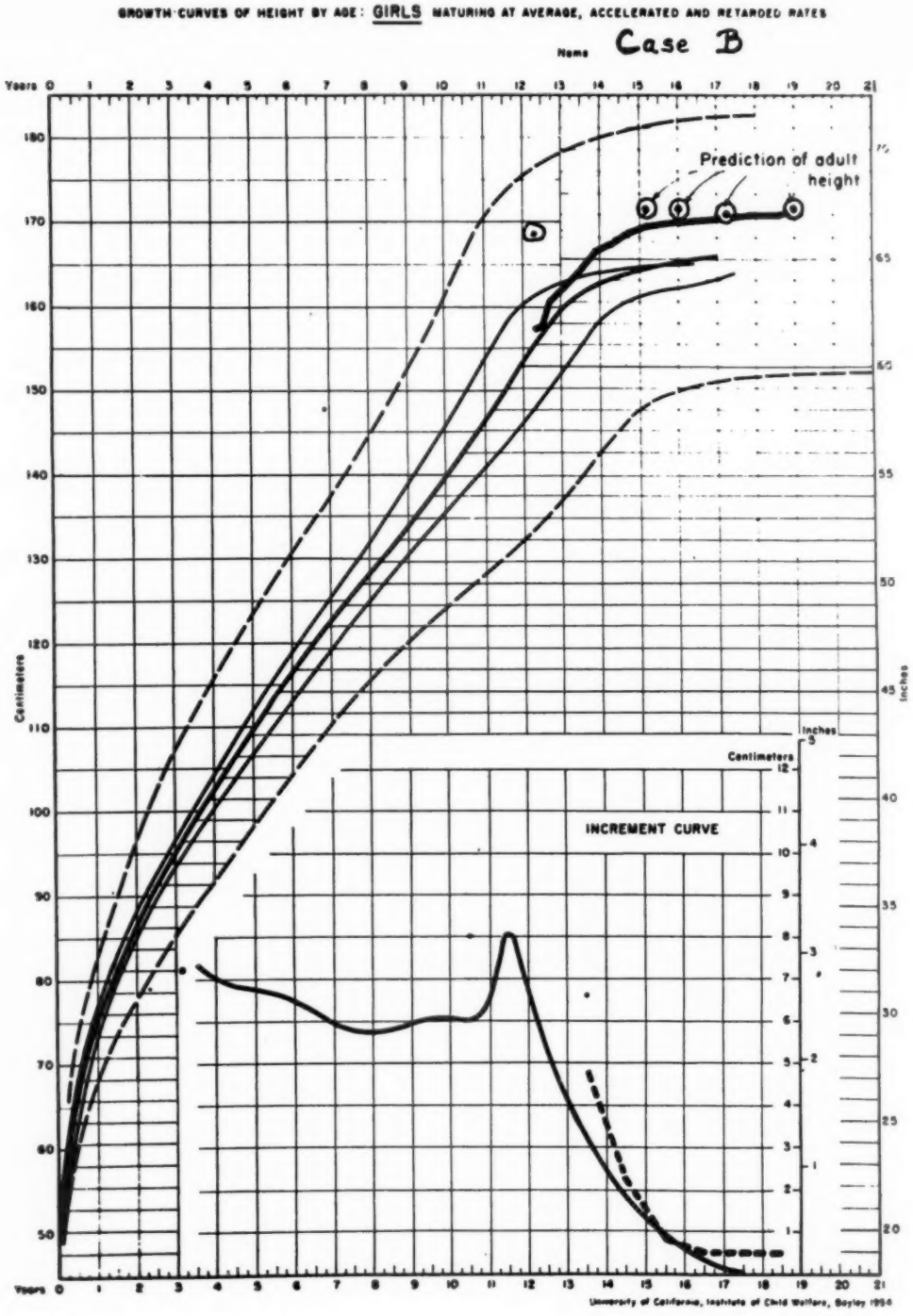
Retarded epiphyseal closure
Hypofeminine, long-legged build
Deficient secondary sexual differentiation, with complete absence of breast development
Only moderately increased linear growth.

DEVIATION CHART FOR ANTHROPOMETRIC VALUES

Name Case B Sex (M) (F) Birth Date Date Age 15-2 Case #

Norms for: Sex (M) (F) ○ Age 15 yrs. Other

MEASURE		Pounds ÷ x 454 / Inches ÷ x 2.54	Kilos / Cm	STANDARD DEVIATION VALUES: -3σ, 2% -2σ, 16% -1σ, 50% M, 84% +1σ, 98% +2σ, +3σ
Weight	W	138	62.6	
Stature	S	66.5	168.7	
Sitting height	Si		88.0	
Shoulder	BA		35.3	
Pelvis	BC	11.0	27.9	
		Ratios		
Above-named measurements in per cent of stature.	W/S		37.1	
	Si/S		52.2	
	BA/S		20.9	
	BC/S		16.5	
Index Trunkbreadth	BC/BA		79.0	


GROWTH CURVES OF HEIGHT BY AGE: GIRLS MATURING AT AVERAGE, ACCELERATED AND RETARDED RATES
Name Case B
Prediction of adult height
INCREMENT CURVE
Centimeters
Inches
Years
University of California, Institute of Child Welfare, Bayley 1954

ANDROGYNIC PATTERNS OF BODY FORM: RATING PROFILE

Bayley-Bayer Standards[9]
17–18 Year Norms

Name Case A | Sex M F | Date | Age 18 - 11 | Skeletal Age | Case Number

ITEM ("A" through "H" from rear-view photographs)	RATING				
	Hyper-masculine 1	**Masculine** 2	**Intermediate, A-sexual, or Bi-sexual** 3, 3a, 3b	**Feminine** 4	**Hyper-feminine** 5
I. A. Surface modeling	Exaggerated hardness of relief. ○	Strong muscle molding. Bone, vein and tendon prominences. ○	b. Muscular and fat. ○ / a. Little muscle or fat. ○	Smooth and soft, with little muscle. ○	Very soft, fat, no muscle. ○
II. Trunk Contours B. Shoulder girdle	Massive. ○	Appears wide, heavy and muscular. ○	b. Muscular and fat. ○ / a. Narrow, "bony." ○	Slight, soft and narrow.	Frail, softly fat ○
C. Waist line	Marked torso narrowing to low waist; may have minimal indentation. ○	Slight indentation due to narrowing of torso. ○	b. Broad hip and shoulder; little ○ indentation / a. Slight ○ symmetrical high concavity.	Definite line accentuated by hip widening.	Marked indentation. ○
D. Hip flare	No widening. ○	Slight widening of hips from waist. ○	Intermediate. ○	Flares into wide hips laterally and posteriorly. ○	Marked flare. ○
E. Buttocks	Very flat. ○	Flat and angular. ○	Intermediate. ○	Rounded and full. ○	Very broad and rounded. ○
III. Leg Patterns F. Thigh Form	Cylinder and/or bulging muscles. ○	Approaches cylinder. Lateral outline convex. ○	Intermediate. ○	Funnel; fat and rounded. Lateral outline concave.	Fat, wide-top-funnel. ○
G. Interspace (whole leg)	Very open. ○	Open center above and below knees. ○	Intermediate. ○	Closed center except small space below knees.	Thighs and knees together, feet apart. ○
H. Muscle bulge (lower leg)	Strong bulge, no fat. ○	Prominent inner bulge of gastrocnemius. ○	b. Moderate muscle bulge. ○ / a. No muscle bulge; spindly. ○	Slight inner bulge; shapely, smooth, outer curve.	Very little muscle, but smoothly rounded and ○ outer curve.
J. Penis size	1 Very ○ / 1.5 Large ○	2 Average ○	2.5 Small ○ / 3 Very ○		
K. Breast size		Absent	○ 3 Very / ○ 3.5 Small	○ 4 Average	○ 4.5 Large / ○ 5 Very
L. Body hair density	1 ○ Heavy on thighs, etc.	2 ○ Easily discernible	○ Sparse.	(3) ○♂	0 Absent
M. Pubic pattern	Disperse ○ / Acuminate. ○	Sagittal ○	○♂	Horizontal ○ Scant	
N. Biacromial / Bigistal Index	←68 / 69 ○	73 / 74 ○	76 / 77 ○	82 / 83→+ ○	
P. Strength (Kg) Grip (R+L)+Thrust +Pull	+←244 / 243 ○	186 / 185 ○	148 / 147 ○	110 / 109→– ○	
Grip (R+L)	+←126 / 125 ○	96 / 94 ○	80 / 79 ○	59 / 58→– ○	
Androgyny Score (Sum of "A"–"H")	12 / 13 ○	19 / 20 B ○ A	25 / 26 ●	34 / 35 ○	40
Characteristic Description (Circle one)	**Hypermasculine**	**Masculine**	**Intermediate Bisexual Asexual Disharmonious**	**Feminine**	**Hyperfeminine**

30.5

Notes

Supplementary Criteria

In Case B, where there was consistent administration of an estrogen equivalent, development was similar to the foregoing picture in that there still was moderately increased linear growth.

Development differed in several respects:

Epiphyseal maturation maintained its normal rate, at least past age 17.

Body build achieved normal feminine proportions and contours.

Deficient secondary sexual differentiation manifested itself only in breasts which were small but within the normal size range, and a complete absence of axillary and pubic hair.

Conclusions

Taken together, these two case studies imply that estrogen deficiency imposed just before menarche had a direct effect on skeletal maturation, on body proportions, and on secondary sex characters. It appears to have had a lesser effect on body contours and on eventual height.

Estrogen replacement seems to have had a normalizing effect on body proportions, body contours, and breast development. It appears to have had less effect on the growth of sexual hair and on the total height.

Noteworthy in this connection is the observation that both girls grew only a little more than would normally have been expected; but where the deficiency was uncompensated, a disproportionate amount of the growth was in the legs.

A finding less easy to rationalize is the inadequate sexual hair development in both girls, most marked in Case B. Since both girls had a 17-ketosteroid output compatible with the normal adrenal contribution of that steroid, the observation challenges our concept that sexual hair grows in response to adrenal stimulation.

If one were to venture into generalization on the basis of observations on two cases, one might suggest the following inferences:

Genetic determinants and complex hormonal inter-relationships dominate basic somatic growth and development.

An isolated estrogen deficiency in an otherwise sound girl produces effects which are relatively much less than those seen in a constitutional deviation such as ovarian agenesis.

Such an isolated steroid deficiency can be at least partly compensated by replacement.

In other words, a healthy girl, castrated in puberty, will not become a giant, but she will be deficient in skeletal and somatic expressions of sexual maturation. Some of the deficiency can be prevented by estrogen equivalents.

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[1]Greulich, W. W., and Pyle, S. I., Radiographic Atlas of Skeletal Development of the Hand and Wrist. Based on the Brush Foundation Study of Human Growth and Development Initiated by T. Wingate Todd. Stanford, Calif., Stanford Univ. Press, 1950.

[2]Bayley, N., and Pinneau, S. R., Tables for predicting adult height from skeletal age: revised for use with Greulich-Pyle hand standards, J. Pediat. **40:** 423-441, April '52; correction **41:** 371, Sept. '52.

[3]Bayley, N., Growth curves of height and weight by age for boys and girls, scaled according to physical maturity, J. Pediat. (In press).

[4]Bayley, N., and Bayer, L. M., Assessment of somatic androgyny, Am. J. Phys. Anthropol. **4:** 433-461, Dec. '46.

Metabolism of the Schizophrenic Child

ETIOLOGIC HYPOTHESIS

Elizabeth Lodge Rees, M.D.

THIS IS A PRELIMINARY REPORT of clinical observations made from August 1952 to February 1954 of two schizophrenic children treated with small doses of atropine. A new hypothesis of the development of the schizophrenic child is presented. Upon this working hypothesis the therapy was originated.

The schizophrenic child has been described only recently in the American and European literature. This is probably the same symptom complex as the atypical child of Rank[1] and the autistic child of other authors. During the past ten years, physicians who have seen these disturbed children have come more and more to think of it as a definite syndrome. At present many are using the term "the schizophrenic child." This is not the same thing as a primary behavior disturbance in a basically normal child, nor is it in any way related to Heller's infantile dementia,[2] where the brain shows pathologic conditions associated with mental deterioration.

There are scattered articles in the European literature from 1925 to 1934, but the entity is not too clearly defined. Articles have appeared in the American psychiatric literature since 1935. The textbook descriptions of Clemens Benda[2] and Leo Kanner[3] are excellent. There is practically nothing in the pediatric or general medical literature.

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DIAGNOSIS

The family doctor or pediatrician is almost always startled by his first impression of the mother and child. He will wonder, as have all the authorities on this disease, about the mother and child. It is pertinent to consider both because etiologic theories differ as to whether the primary problem is in the mother or in the child, that is, does the schizophrenic child develop his illness because of a pathogenic attitude of his mother, or does the mother's attitude result from trying to care for a sick child? The clinician may not be intimately acquainted with the schizophrenic process as it occurs before the age of puberty. The unusual mother-child combination often is completely foreign to his usual observations. On the other hand, the doctor who knows the syndrome may strongly suspect schizophrenia within the first five minutes. The child and mother look and act different from the normal, and the physician is aware of this before he proceeds with the standard medical work-up.

The essential characteristics of this disease are, first, that the child lacks ability to form interpersonal relationships and, second, that he has a lack of ego and superego formation. Since this child cannot form interpersonal relationships, his is a rejected mother. Therefore, the physician may be more impressed by the mother's behavior than that of her child. She will probably be upset, confused, and may appear as a rejecting mother. Her anxiety about the child may seem unwarranted in the light of the child's behavior at the moment. But if one realizes that she has received no love from her child and has been treated by him as a piece of furniture, while concurrently she may have been severely criticized by both professional and nonprofessional people because of her child's behavior, then her attitude will make sense.

In addition, there is an ebb and flow to the

schizophrenic process within the child, his behavior being a neurotic adaptation to the schizophrenic process. Therefore, the physician may see a child gazing around the room completely out of contact, or he may see him when he is full of compulsions, obsessions or fears. He may be quietly reserved or wildly aggressive. On one of his better days, he may appear normal or, as a psychiatrist would term it, anxious normal. As the child becomes older, there is a great deal of compulsive behavior and repetitive body actions. These latter may be rocking, spinning or head banging. These children are often severe and compulsive feeding problems. Toilet training usually proceeds upon normal lines, and then later the child may show bizarre behavior toward these functions which may be quite shocking to the uninitiated. The mother will have found it almost impossible to teach any of the accepted social graces from the age of 2 or 3 on up. If the child himself decides to learn something, he will learn it rapidly. Often the schizophrenic child displays high ability along one or two lines. For example, in the older age group, one child may read extremely well and block completely on arithmetic; another may be musical; a third mechanical, and so forth. Add to this the fact that the process can be set off by any form of stress, for example, fatigue, irregularity of meals, lack of sleep or emotional strain; and the extreme vigilance of the mother, especially if this is an older child, is explained. Occasionally the mother may simply have given up. She may be severely depressed, although rarely completely indifferent.

The lack of ego and superego formation results in the child's failing to internalize his own control. Therefore, the mother may appear domineering because she will have had to furnish control for her child far in excess of the supervision needed by the normal child. She may have evolved some successful ways of handling her child during years of constant vigilance. These will not be the accepted methods of handling a child in our culture.

History

If this is a first child, the mother's descriptions may be vague. Concern can date from the child's earliest days or from a later clinical appearance of the disease process between the ages of 3 and 5 or in the prepubertal period. If there are siblings, the history will be more definite. Lack of speech or expulsion from nursery or elementary school often provides the impetus for the mother to seek medical help. Since the schizophrenic process has been diagnosed in all races, all economic groups, and on all intellectual levels, the mother and child may come from any segment of the population. At the present time, boys have been diagnosed two to three times as frequently as girls.

The child's development in everything that does not involve social relationships will be normal. Motor co-ordination and mechanical ability will often be superior. On the other hand, social contacts, more specifically speech, attempts at play with others, and group behavior will be bizarre or on a much younger age level. The child treats people as objects. His interest in certain of his own toys or other articles is almost of a compulsive nature. He will have done nothing that has not been done by normal children, but the quantity of his deviant behavior will be far in excess of that produced by any one normal child in a comparable period of time. The behavior of the schizophrenic child is often inappropriate as to time, place, and his age, frequently showing a complete lack of regard for other human beings.

Physical Examination

1. Appearance. There are no stigmata of mental retardation or congenital defect, yet there is a characteristic look in the face and eyes of a schizophrenic child which once known is never forgotten. It is a combination of anxious tenseness and flatness with a far-away look to the eyes. There is no true eye contact between examiner and child.

2. Speech. The child may not talk at all. If he talks, it will probably be about what and with whom and when he pleases. It is extremely difficult to get him to answer specific questions or to discuss a topic which the examiner presents to him. There may be absence of speech, so that the phenomenon of echolalia, seemingly irrelevant speech and disregard or inability to use pronouns correctly, may be striking. The quality of voice is unique, almost other-worldly. He speaks in uninflected, connected syllables rather than in free flowing word groupings. His voice may be hollow, without normal timbre but with changes in volume.

3. Tissue Turgor. Sometimes all tissues from the skin to the bone feel abnormally firm or tense. If this is at its height, the child may complain of pain if grasped by the arm or leg. At other times, the tissues will feel normal, and yet at still other times, for example, if the child is encouraged to sit on the lap of a friendly adult, he may relax and seem to melt his own body almost into that of the other. This unique type of body relaxation is one of Bender's[4] soft neurologic signs and it is one of the most applicable in the ordinary medical office.

4. Systemic Examination. Complete physical and neurologic examination will reveal no other standard abnormalities unless, as rarely happens, the child has more than one pathologic process.

Laboratory Tests

The clinical laboratory will report normal values in standard urine and blood tests unless the child has a concomitant illness. The skull films also will be normal. The electroencephalogram may be normal or only slightly abnormal but not diagnostic. Psychologic testing will reveal a normal or high I.Q. if a valid test can be obtained. Developmental tests that do not involve contact between the tester and child will be normal. Experienced examiners, by using a variety of tests, can often diagnose the schizophrenic syndrome.

Differential Diagnosis

Psychiatric consultation should be obtained. The ramifications of psychiatric therapy are beyond the scope of this paper.

1. Behavior disturbances in the normal child. Bender and Helme[5] present this in detail in cases where behavioral deviation is of such severity that hospitalization in a psychiatric ward is indicated. The ordinary behavior problems seen in routine practice represent less difficulty in differential diagnosis. If the environmental disturbance is in the home, the siblings will also be disturbed. The siblings of the schizophrenic child, on the other hand, are normal in a pediatric sense, although elaborate psychologic investigation may reveal neurotic traits.

2. Mental retardation without physical stigmata. This can be confused with the autistic stage of the schizophrenic child. Neither of these two diagnoses should be made on any child without the most thorough evaluation and consultation.

3. The brain-damaged child without clinical evidence of neurologic or orthopedic disease. This can be the most difficult of the differential diagnoses. Again, thorough study and an electroencephalogram are helpful. Strauss and Lehtinen[6] describe the brain-injured child in detail.

Etiology

At this time, the etiology of the schizophrenic atypical or autistic child is not understood. Hypotheses and theories of all mental illnesses date from antiquity. In ancient times, these and other disease processes were variously ascribed to a visitation of a devil, or to divine intervention. The insane, who were thought to be in special favor with the gods, were protected.

The psychoanalytic group considers that the cause is environmental, more specifically, that the parent has damaged the ego formation of the child; some think that, in addition, there may be a constitutional factor in the child.[7]

Bender[4] defines childhood schizophrenia as a clinical entity occurring before the age of 11. She thinks the cause is an encephalopathy and therefore not only within the child but organic.

Kallmann[8] presents evidence of a genetic or hereditary predisposition to schizophrenia.

An entire volume of *Nervous Child*[9] is devoted to "our present knowledge of schizophrenia in childhood." In this volume, Hendrickson[9] summarizes the current thought on etiology, and concludes with the statement that "the truth is not yet known."

While the author had one of the two cases reported under observation, she evolved a new hypothesis of metabolic causation, upon which the atropine therapy was based.

The child observed was overactive, almost impossible to control, ate poorly, slept poorly, and had a wild look in his eyes. His behavior appeared fearful and out of control. It was as if he were responding on a primitive level, not knowing whether to fight or flee. The thought occurred to the author that this child could be having an almost continuous outpouring of adrenalin, or that for some reason the adrenalin was not being destroyed. When this idea was combined with the history (his behavior would become deviant if a meal were late or if he were fatigued or emotionally upset), it appeared that the process within the child was on an organic rather than a purely psychologic basis. Since atropine counteracts certain of the effects of adrenalin, atropine was chosen for therapeutic trial. It is not within the scope of this paper to discuss whether the adrenalin-like effect is primary or secondary to some other chemical imbalance.

The hypothesis of metabolic cause of childhood schizophrenia can be stated in general terms. *If within the body there is a chemical produced which, either in excess or in deficit, exerts an anesthetic-like effect upon the brain, the total behavior of the schizophrenic child can be explained.*

According to Childs's theory, an organism is most vulnerable at the highest centers and progressively less vulnerable as a toxin descends to the lower centers. Physiologically, the highest brain centers exert a control over the more primitive centers.

In well-known metabolic or chemically determined diseases, the chemical changes vary in degree from case to case and also to some extent in the same case at different times. Certainly the diabetic child requires a varying amount of insulin according to his environmental situation, namely, amount of exercise, fatigue or emotional disturbances. Therefore, it is perfectly conceivable that the hypothetic chemical disturbance in the schizophrenic child varies from case to case and from time to time in the same case.

Case Reports

A., male, aged 10½ years, had been diagnosed as a schizophrenic child and had received psychiatric therapy once weekly since age 5½. Closely observed for one week, August 1952, at age 9, when he was out of contact with the environment, he was tense, hyperactive, irritable, destructive. He ate only if fed or constantly supervised, and slept poorly. He was started with atropine, 1/1000 grain at night, which was repeated the next morning at 7:30 a.m. and 9:00 a.m. The dose was increased to 1/700 grain at 1:00 p.m. and 5:00 p.m. A large dinner at 6:00 p.m. was eaten voluntarily, and he requested additional food at 7:45 p.m. The next morning his subcutaneous and muscular tissues had for the first time the turgor of a normal child. Previously there had been an abnormal tenseness to these tissues. Atropine, 1/700 grain, was continued every 3½ hours while the child was awake. He remained in contact for the next week, was quite rational, easily approached, and was eager to learn. He was returned after these two weeks to his home, and although contact could be obtained more easily than before, while medication was continued, he did not do well.

In May 1953, he was placed under 24 hour a day therapy and atropine was stopped until November 1953 when it was resumed. The therapist has repeatedly noticed that when atropine, 1/700 grain, is given every 3½ hours, he is quieter, more easily contacted and taught. She has also noticed that if atropine is withheld for a day, he is irritable and more difficult to approach or contact.

B., male, aged 9 years, had been diagnosed as a schizophrenic child and had been under 24 hour a day therapy since age 7 at the same place as case A. He was withdrawn, quiet, and non-aggressive. December 1953 he was started on atropine. His reaction to atropine, 1/700 grain every 3½ to 4 hours, was the reverse of case A in that he became active, aggressive, and self assertive with the other boys in residence. While he was more difficult to handle, he could be much more easily contacted and taught by the therapist. The author thought that the schizophrenic process in this child might be more severe and therefore more anesthetic than in case A, and therefore his dose was increased to about 1/500 grain. On this he became restless and was unable to sleep well. It was omitted for a day, and then reduced to 1/700 grain.

At Christmastime his mother took him home for several days. She too noticed it was demonstrably easier to contact him when he was taking medication than when he was not.

Discussion

Whatever atropine does to cerebral metabolism, it certainly does not provide the complete answer to the problem of childhood schizophrenia. Schizophrenic children need total care, which involves residence, psychotherapy, schooling, and recreation. Apparently atropine counteracts the schizophrenic process partially and makes psychotherapy and reeducation easier. Since the schizophrenic child has been ill most of his life, he has a bizarre concept of the world. Therefore, no organic medication could be expected to succeed without a thorough and prolonged program of rehabilitation including reeducation and psychotherapy.

As yet there have been no chemical investigations to prove or disprove the validity of this hypothesis of an anesthetic-like chemical as the cause of the schizophrenic process in childhood. Studies on large groups of children at all ages are necessary.

Summary

This report summarizes clinical observations made on two schizophrenic boys treated with low doses of atropine. This medication was given because of the author's new hypothesis of the metabolic causes of childhood schizophrenia.

ADDENDUM: Report of Six Cases Treated With Chlorpromazine Hydrochloride

Chlorpromazine hydrochloride (thorazine®)* has been used clinically since 1951 in Europe, and for more than a year in this country. There are many reports of the clinical application of thorazine® in neuropsychiatric and other conditions of the adult. The only reference found concerning its use in the treatment of children is that of Heuyer, Giraud, and Galibert.[10] Most authors recommend that this drug be used either in a hospital or under carefully controlled conditions.

Opportunity arose to treat six severely disturbed white children while they were in a small private residential unit under the constant supervision of the director, who lived at all times with them. Four of the children, all boys, had been diagnosed by psychiatrists as belonging to the group designated by some as "schizophrenic children." The fifth, a boy, was diagnosed as depressed, probably prepsychotic. The sixth, a girl, was sent to this residence for two months to be diagnosed. It was not clear whether she was schizophrenic or brain damaged.

The treatment is given in an atmosphere as nearly homelike as possible. Daily tutoring by a schoolteacher is given. The director-therapist is in complete charge; however, all the children are under the supervision of psychiatrists and a pediatrician. The therapeutic environment includes many animals, especially dogs and cats. Activities include swimming, horseback riding, hiking, automobile

*Thorazine® was supplied for this project by Smith, Kline and French Laboratories.

excursions, shopping, and all the normal activities for children in our society except public schooling, in which they cannot participate.

CASE 1. Boy, aged 4 years, was a perfect physical specimen, but apparently did not speak at all and seemed to live entirely within himself. He was somewhat aware of what was going on around him, but he did not participate in it. He was not fully toilet trained, and was very selective of what he would eat. He liked to walk or run on tiptoe. He screamed frequently, yet was an appealing, golden-red-haired little boy. July 20, 1954, he was started on thorazine®, 10 mg. three times a day, later reduced to twice a day. He improved, started saying words, completed his toilet training, became interested in playing with adults, though not with children, and stopped screaming.

CASE 2. Boy, aged 11 years, had been in this residential center over one year. Without medication, he would frequently become very impulsive, unpredictable, and commit aggressive or destructive acts, after which he would be quite upset. His unpredictable behavior dated from about 15 months of age when, after learning to walk well, he would simply knock over or tackle every child whom he saw, and would strike animals over the head. Despite years of work with him, including four years of weekly psychotherapy, he could not go to school, and had always had a private tutor. Thorazine®, 25 mg. three times a day, was started July 4, 1954. When on this drug, he is less likely to act unpredictably. He can be approached for psychotherapy, can take part in the daily activities, and work much better with his tutor.

CASE 3. Boy, aged 9 years, entered the residential unit June 29, 1954. He was quite anxious, probably because he had left home suddenly when his mother became ill. His undesirable behavior was bothering other children, although he participated fairly well in the program. Thorazine®, 25 mg. twice a day, seemed to relieve his anxiety, and he did not hit or tease the others when he was receiving it. He is still in residence and being medicated in addition to the full therapeutic program. Despite the fact that he had attended public school while at home, he had not learned to read, and had been difficult to handle in the classroom. Therefore, he is working with a private tutor.

CASE 4. Boy, aged 7 years, had been in residence for over six months. His abnormal behavior was characterized by a withdrawal to a fantasy life. Aggression and destruction sometimes alternated with the fantasy state. Thorazine®, 25 mg. twice a day, was started August 1, 1954. When taking this drug, he can be encouraged to participate in the daily activities and the tutoring.

CASE 5. Boy, aged 12 years, was admitted to the residential unit the middle of July 1954. He would sit and brood about himself and his inability to get along with the other members of his family. He was unable to sleep and frequently stayed awake late at night, or awakened before dawn and went to the director for reassurance. Barbiturates helped him sleep, but had no other beneficial effect. Because thorazine® seemed to be a useful adjunct with the other children, he was started August 1, 1954, on 25 mg. three times a day. While taking this he is able to take part in the daily routine and receive tutoring. This boy knows when he needs the drug and when he does not, so that it is possible to medicate him selectively.

CASE 6. Girl, aged 4 years, was a severe problem, primarly because of her screaming. She was unable to speak any words, was not toilet trained at all, but she could scream, and this she did from 2:30 p.m. daily until supper, and then after supper until she fell into an exhausted sleep, sometimes as late as 1:00 a.m., after which she slept soundly. Barbiturates, even in large amounts, had no effect. Benadryl®, 25 mg. four times a day, was effective only two days, and then even raising the dose was without effect. Physical warmth and standard therapeutic measures were without benefit. July 13, 1954, ten days after she entered residential treatment, she was given thorazine®, 10 mg. three times a day, which resulted in considerable change in mood and behavior. The screaming stopped. It was not possible to toilet train her in the two month period, but she did learn to eat at a table with two other small children. There was no change in her awkward muscular co-ordination. The conclusion was that she was brain damaged, functioning on a mentally retarded level with an additional emotional disturbance. Thorazine® was definitely beneficial in quieting her. It did not produce sleepiness in the daytime and had no adverse effects. With this drug therapy, it would be possible to train and teach her as a brain damaged child.

SUMMARY

Chlorpromazine hydrochloride (thorazine®) has been used in the treatment of six severely disturbed children, ages 4 to 12, while they were under a constant therapeutic regime. The observable effect of the drug lasts about six hours. There have been no adverse effects. The beneficial effects seem to be limited to: 1) the relief of anxiety, and 2) making these children more easily handled by skilled personnel. There has been no change in the so-called schizophrenic process of the four boys, the underlying depression in the fifth boy, or the brain damage in the girl. It is felt that clinically this drug is a useful addition to education, re-education, protection, and psychotherapy, which are all important for these very ill children.

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TEST FOR SPECIFIC FOOD ALLERGIES

Lydia Allen DeVilbiss, M.D.

The original Leukopenic Index was published by Vaughan, in 1939,* and admitted to be time-consuming. It was also so complicated it was not practical for routine use, and became obsolete. But the principle is correct, as has been demonstrated by M. J. Flipse, M.D.; Millard B. White, M.D.; Herbert J. Rinkel, M.D.; and Bela Schick, M.D.; and confirmed through personal communications to the author.

When a normal person eats a meal, the white blood count increases. But if an allergic patient takes a food or drink to which he has become sensitized, the white blood count decreases by 1,000 cells, more or less, within 30 to 60 minutes.

Within 24 hours, following this initial decrease, the white blood count increases to two or more times the normal count. This allergic toxic reaction is accompanied by increased manifestations characteristic of the patient's allergic disease. The high count returns to normal in a day or so, when no infection is present, if the offending food is not repeated.

When a patient is allergic to several foods which are part of his daily diet, it results in the masked symptoms of allergy. The erratic white blood count can be confusing and can complicate the diagnosis of medical and surgical problems.

The absence of an increase in eosinophiles does not exclude the possibility of allergy. In acute disease, or if the patient is given antihistamine, the eosinophiles may decrease or disappear from the circulating blood. Medication introduced intramuscularly or intravenously may aggravate an allergic state, with the exception of the parenteral use of ACTH or cortisone in allergic asthma.

In atopic dermatitis, relief from the sometimes almost intolerable itching is obtained by application of hydrocortisone ointment, but the effect wears off within several days after it is discontinued. Other medication for food allergies is symptomatic, except for the replacement of vital food elements such as calcium and vitamins in a restricted diet.

For permanent relief, and usually a cure, it is necessary to detect the offending foods and exclude them from the diet until the allergic response has been overcome. In a child, this usually occurs within one year; in an adult it may require from one to fifteen years, with an average of four or more.

* Vaughan, Warren T., Practice of Allergy, St. Louis, C. V. Mosby Co., 1939.

(From DeVilbiss, L. A., Food allergies, diagnosis and treatment, Clin. Med. **2:** 593-596, June '55).

Pediatric Gynecology

I. CLINIC EVALUATION AND DISCUSSION *

Sadie E. Berkove, M.D., and Marian C. Maynard, M.D.

THE PEDIATRIC GYNECOLOGY CLINIC of Children's Hospital of the East Bay was organized first in 1945 to answer a need filled neither by the gynecologist who handled only a few children nor by the pediatrician who, until then, had had no special training in gynecology. Dr. Clifford Sweet, a keen visionary in advanced pediatric techniques and a mentor of research, had discussed the advantages of a pediatric gynecology clinic operated by someone interested in both pediatrics and gynecology.

When we thought of writing this paper, we did not know exactly what its function should be. Should we make it a statistical analysis of pathologic findings proportionate to the number of cases, or a rather general discussion including the clinic's origin; source of cases; methods of examination and treatment; types of cases encountered and their disposition; or the relationship to other fields of medicine and public health education?

We chose the last named because we felt that this was the most important. Statistics can always be compiled; however, unless we are able to compare our statistics with those of numerous other clinics, we feel that no definite conclusions can be drawn. We found that there was a dearth of articles on the gynecologic problems of children. Textbooks dismissed these problems briefly with an occasional paragraph. Articles were brief and dealt mostly with the unusual rather than the common problem. With the exception of one textbook on pediatric gynecology,[1] there was nothing to instruct us on our approach, methods of examination, instruments necessary, and so forth. We felt that we were pioneers in this important but moderately neglected field. We had seen many patients, both clinic and private, in our offices before the establishment of a department of pediatric gynecology at Children's Hospital. In the beginning, we had only a moderate amount of opposition from child psychologists and very little opposition from a small number of pediatricians. Most of our staff was open-minded, willing to be convinced that such a specialty was necessary. School nurses, public health nurses, school teachers, and social service workers from orphanages or correction homes, and hospital residents who had been faced with gynecologic problems, all needed this help. The first two years were difficult, but with the continued encouragement from Dr. Sweet and Dr. Schauffler, we continued. Dr. Schauffler conducted a complete symposium for our hospital last year.

OPERATION OF THE CLINIC

Our main concern is the instruction of our residents in all aspects of pediatric gynecology, including the art of preparing a patient for gynecologic examination without causing psychic trauma.[1] Whenever possible, except in emergencies, the patient and the parent are given a preliminary interview before examination is done. When it is ascertained that the patient for psychologic reasons or because of pain cannot be examined in the clinic, immediate arrangements are made for examination under anesthesia. Interestingly enough, examinations under anesthesia have been rather infrequent. The psychologic preparation of the patient is of utmost importance and the extent of co-operation almost incredible (Fig.) One little girl who faced the examination with a moderate amount of apprehension, when questioned afterwards exclaimed that there was absolutely no pain and that it was much easier than having her throat looked at because "this examination didn't make me gag." All examinations in the clinic are made preferably in the presence of parent or guardian.

* Children's Hospital of the East Bay, Oakland, California. Special thanks for the encouragement of Clifford Sweet, M.D., emeritus chief, and Edith Meyers, M.D., chief of Outpatient Department.

Dr. Berkove and Dr. Maynard are both on the teaching staff of the Providence Hospital and the Children's Hospital of the East Bay.

A careful history is taken from the mother stating the complaint without any interrogation. When the mother has completed her remarks, she is then questioned concerning the length of the complaint; previous treatment, the response of the child to the treatment, and any side reactions noted; questions are asked relating to pain, character of discharge, menstrual cycle, dysmenorrhea, correlation between the onset of the gynecologic problem, and any systemic disease; or other related circumstances. Parents are reassured that the hymen will not be disrupted by the examination unless it is imperforate. A permit for the examination is signed by the parent or guardian. This we find essential. In ten years' operation of this clinic, we have had no legal repercussions. Our function is purely medical and any medico-legal problems are referred to our clinic chief, who confers with the police, district attorney, school department, and so forth, concerning the interpretation of the examination and treatment. No resident is permitted to conduct a complete examination unless he has been carefully instructed in the conduct of such an examination. Urologic, rectal, and medical problems are referred to their respective clinics.

Examination

The patient voids before endoscopy is attempted. The youngster is placed in lithotomy position and notation is carefully made of external genitalia, secondary sex characteristics, rashes, congenital deformities, tumors, unusual odors or evidence of trauma. The labia are very carefully separated at the fourchet only, special emphasis being placed on the fact that the vestibule and the clitoris are not to be palpated except under anesthesia. We feel, in response to those who claim psychic trauma from genital or rectal manipulation, that far more psychic trauma is inflicted by a chronic vulvar dermatitis, a severe discharge, or pain which disrupts the child's school and play life. The vaginal orifice is then exposed by separation at the fourchet by the thumb and forefinger of the left hand. The size of the instrument is thus judged and the endoscope inserted. The amount of light is controlled by a rheostat. The cervix is visualized and the vaults, anterior and posterior, right and left, are examined for discharge, color, bulging, and presence of foreign body. Direct smears are taken of cervix and vagina; hanging drop preparations are made in normal saline for higher organisms; and cultures are taken on plain blood agar and chocolate media, the latter being cultured under low oxygen tension. The clitoris and urethra are carefully observed but not palpated. Examination is completed by inserting the forefinger into the rectum, the left hand over the pubis, and performing a bimanual examination.[1,2] If any surgical interference is necessary at this time, it is then scheduled. Most of the patients are extremely co-operative. We rarely have a recalcitrant youngster and many times foreign bodies can be extracted without resorting to surgery.

Instruments

A complete endoscopic set (National Instrument Company) serves our purpose admirably. It is supplemented by bivalve vaginal specula and anuscopes of various sizes. Our catheters range from number 8 to number 14. We feel that anything larger than this is rarely necessary. A lithotome of the longest and narrowest size is used for the extraction of foreign bodies. Our applicators are of the 16 inch length with very small cotton tips firmly adherent to the tip of the applicator. We use a modified Shelanski insufflator in which the tip has been cut to half. Our insufflations are done with a low-powered electric insufflator which eliminates the movement of the instrument brought about by hand insufflation. These are the basic instruments for examination and are supplemented as necessary, depending, of course, on the procedure decided upon and any exigencies which may have developed.

Clinical Experience

Our clinical experience is extremely varied and would require a volume to relate in detail. It will be discussed briefly in regard to the following: external genitalia, lower genital tract, pelvic viscera, menstruation, and menstrual disorders.

External Genitalia

The perineum, labia, urethra, and clitoris are subject most commonly to trauma and dermatitis. We have seen a moderate number of perineal and vulvar lacerations. When there is active bleeding, our patients are immediately hospitalized and the emergency of the moment handled, whether it be shock from either blood loss or extreme pain. The patient is then given the usual prophylactic therapy and further examination and treatment continued in the operating room.

Lacerations, hematoma, and other traumatic sequellae are handled primarily by the surgical service. Lacerations are treated by debridement and primary approximation of tissue. Hematomata are uually extensive because of the cavernous nature of the vulvar tissue, so that conservative medical treatment is impractical.[3] Small incisions are made, the clot is evacuated, and a one-quarter inch aureomycin® ointment pack inserted; this usually results in healing without infection or any other sequellae.

In our experience, injury to the clitoris has resulted in hypertrophy; in one case to the extent of having actual psychologic disturbance to a young-

ster aged 7, who was continually embarrassed in the school toilets by having other girls call her a boy. These cases have been treated conservatively; and instead of a clitorectomy, a partial resection of the residual foreskin and a plastic procedure on the clitoris itself is done; the excessive portion of the corpora is resected, with care taken to retain adequate blood supply. This retains a semblance to the normal anatomy. Our results have been unusually good.

Hypertrophy of the clitoris has been observed in a large number of non-Caucasians. We have watched these youngsters carefully over a long period of time and find that the remainder of the external genitalia eventually grow up to the clitoris. Our impression regarding circumcision[1] is that it seldom accomplishes anything and certainly does not influence masturbation except when there are adhesive bands and excessive smegma. In ten years, we have done no circumcisions and only three retractions of the foreskin and these only because the entire clitoris was involuted by smegma. Freeing of the clitoris eliminated the discomfort from which the child was suffering. All manipulations of the clitoris are accomplished under anesthesia.

We saw two cases of urethral prolapse.[4] One responded readily to conservative therapy. The other was sent to the urologic department for surgical correction.

A very common complaint is one most aptly expressed by the parent who felt that "her child either had no vagina or was a hermaphrodite." Here we have found a labial fusion[5] or agglutination beginning at the fourchet and extending sometimes above the urethral orifice, causing inability to void with a pseudourocolpos. This usually is a pseudofusion caused by smegma or erosion of the labia from infection with adhesion. Occasionally, we have encountered a true fusion resembling the scrotal raphe of the male.[5,6] The pseudofusions are handled very simply by separation with a probe and the use of vitamin A ointment combined with minute amounts of estrogen, which seems to cornify the cells adequately. A true fusion is handled surgically.[5] We have always found that simple suturing of the labial fold is inadequate and that inversion of the labial edges with a plain catgut (00000) suture is necessary to prevent subsequent fusion.

Tumors in the external genitalia have been comparatively rare. We have had two adolescent patients with sebaceous cysts of the labia majora, and two patients with Bartholin cysts, both noninfectious. These were handled by means of the usual surgical procedures.[1,3]

We encountered no bartholinitis, only one case of acute skeneitis, and no malignant disease.

Resident physician examining girl age 2½ years with endoscope without anesthesia.

One child, who had had an imperforate anus at birth, for which an opening had been made through the perineum into the rectum, was treated by corrective plastic surgery.[3] A new anal opening was made and the perineum restored to its original anatomical status. The surgery was successful. Another child was found to have a double vagina. When this was revealed to the parent, she and the patient left and did not return.

Our postoperative treatment either for trauma or primary surgery is routine. We suggest a simple combination of an antibiotic and anesthetic ointment with parenteral antibiotics whenever necessary. If the laceration is extensive enough to involve the urethra, a Foley catheter is inserted, and the patient restrained.

Irritations or dermatitis of the vulva have been caused by diaper rash, secondary infection from scratching associated with nonspecific vaginitis, gonorrheal vaginitis, yeast infections and vaginal trichomonas, epidermiphytosis, diabetic pruritus, and vaginal foreign body with infection. Treatment is determined strictly by the diagnosis. Not only is care given to the primary lesion, but also a request for a general medical examination is made, to determine the presence of any acute or chronic systemic disease. We usually find that a soothing ointment of any type and simple sitz baths with directions to the parents regarding hygiene and toilet habits aids considerably in eliminating a large number of vulvar irritations.

We agree with Schauffler [2] that the term vulvovaginitis is generally misleading, and that the terms vulvovaginitis and vaginovulvitis should be used discriminately, depending upon the origin of the disease process.

Leukoplakia of the labia, supposedly rare, not

common certainly, was found in four patients all under the age of 8 years. According to Schauffler,[4] this is a type of "senile" manifestation and is caused by hypoestrogenism. Our patients have responded to applications of half strength premarin® cream, thyroid orally, and 25,000 to 50,000 units of vitamin A orally per day. One child of 8 years repeatedly developed secondary sex characteristics and hypertrophy of the ductal tissue of one breast.[5] Cessation of the ointment for two weeks eliminated the development of secondary sex characteristics, and an exacerbation of the disease. It was necessary to use only minute amounts of estrogen cream twice weekly; her response was slow although there was an eventual cure. It has been necessary to maintain the use of vitamin A, premarin cream, and thyroid to the present time. None of these youngsters has menstruated as yet.

Hymen, Cervix, and Vagina

We have had two cases of hematocolpos subsequent to imperforate hymen. These were handled in the usual fashion by simple incision of the hymen and the suturing of a hymenal cuff.

Foreign bodies, of which we have had a wide variety, included safety pins, fox burrs, pencils, fountain pen tops, cotton, paper, cotton from applicators used several months before to take smears, crayons, bobby pins, combs, one old fashioned tortoise hairpin, coins, buttons, and various small toys. If a foreign body is suspected, rectal examination is done first, to locate the approximate area, since it is easy, with the endoscope, to overlook a vaginal foreign body which has been in place for some time with an overlay of a fibrinous exudate. This is true in flat objects, such as coins and pins. When we palpate a foreign body and location is impossible with an endoscope, a roentgenogram is taken and more extensive examination done under anesthesia. Occasionally, we will find a patient who has perforated the cul-de-sac with a long object, usually a pencil. If we see the patient shortly after perforation and if the perforation is of any size, it is commonly recognized by a cuffing of the mucous membrane at the point of perforation in the posterior vaginal vault posterior to the cervix; a trickle of serous exudate is noted immediately when the patient is requested to perform the usual grunting pressure. Occasionally, we have had youngsters sent in with perforations of fairly long standing and localized peritonitis. All of these patients responded well to the same treatment: semi-Fowler position, extensive parenteral antibiotics, and other supportive therapy; there were no sequelae.

Rectovaginal and vesicovaginal fistulas usually followed perforating injury to the genital tract. One postpolio patient, who had an old type mushroom catheter inserted, apparently was perforated by the stylette. These fistulas will occasionally heal directly; others require surgical intervention.

We encountered no congenital absence of the vagina and only one patient over ten years of age in whom no cervix was noted and no pelvic viscera palpable. A request for an exploratory laparotomy was denied. Pseudohermaphroditism[6,8] was encountered in two patients. One patient was reared to the age of 5 years as a male. Exploratory laparotomy revealed normal pelvic organs for age. An introitus was constructed, but follow-up was not completed. The second patient was sent to a nearby university medical center for further study.

Vaginitis[1,9,10] is a debatable subject, and there must be established at the inception of any discussion the determination of whether it is primary or secondary. We have found any systemic disease that affects the mucous membranes of the other portions of the body can affect in the same way the mucous membranes of the pelvic tract; and when the general systemic difficulty is cleared, the vaginitis responds in a similar fashion. Occasionally a secondary infection supersedes and must be treated separately. The most common causes of vaginal discharge in our clinic have been: a) Nonspecific vaginitis caused by B. coli group, Streptococcus, both hemolytic and nonhemolytic, and Staphylococcus; and b) Trichomonas, in distinct contradiction to several published articles[1,10] which claim there is no trichomonas in the child and young virgin. We have found trichomonas in a newborn premature infant of seven months' gestation, and in various ages up through our 15 year olds. Treatment of the trichomonas locally by various common preparations and insufflation is a permanent cure only when both the urine and the rectum are cleared of trichomonads.

We are aware that this will probably cause an uproar in the ranks of those who have found that trichomonas is a rare invader of the immature tract. However, such has not been our experience. We have found that the examination for trichomonas must be prompt, the saline warm and minimal in amount. Any amount of saline over one or two cubic centimeters so dilutes the specimen that the organisms except in fulminant infestations are usually missed, and washings practically never yield positive findings.

An interesting type of vaginitis has been encountered as a result of a supernumerary kidney with ectopic ureters. This vaginitis is usually associated with a hemolytic Streptococcus and stricture, responds readily to antibiotic therapy, and recurs promptly upon cessation of antibiotics.[9] At this time, a catheterized urine specimen usually reveals

large clumps of pus cells and yields the same organism on culture. In an older child, flank pain can usually be elicited. With these symptoms, intravenous pyelography practically always reveals anomalies in the urinary tract. Surgical correction of the anomaly clears the vaginitis spontaneously.

In our experience, coliform bacillus, Streptococcus, and Staphylococcus have responded most satisfactorily to parenteral antibiotic accompanied by insufflation of the vaginal tract with a widely active antibiotic powder. We have just begun to use the antibiotic vaginal suppositories, and have not yet formed an opinion as to their efficacy. Incidentally, we have found that it is time-saving to request a sensitivity test on the predominant organism obtained on two consecutive cultures, provided that we are convinced that the predominant organism is not a contaminant.

Enterobiasis is a not uncommon offender, and clearing of the intestinal tract is primary, of course; the vaginitis will clear if treated in the same fashion with the rectum and anus: 2½ percent ammoniated mercury applied to both anal and vaginal orifices is necessary in addition to our now simplified treatment of enterobiasis of the enteric tract. We have found no other parasitic infestations.

Gonorrheal vaginitis was moderately prevalent in the first two years of our clinic. The last eight years have yielded it in no more than four patients. The usual intensive antibiotic therapy parenterally seems adequate. Care of the external genitalia with mild antiseptics is still observed, and the parents cautioned about rigid technique. We treated one 10 year old patient who developed a unilateral bursitis of the elbow, and a subsequent pericarditis. There was no response to antibiotic therapy, and repeated blood cultures were negative. Unfortunately, our presumptive diagnosis of gonorrheal septicemia was proved at postmortem examination. We have not used any parenteral, oral or local estrogenic therapy in the treatment of specific or nonspecific vaginitis. In our opinion, there are many other drugs which yield better results without the side reactions of the estrogens. Early in our clinic, we diagnosed one primary chancre at the external hymenal border, in a girl of age 12, and verified the diagnosis by dark field examination. This was before antibiotic therapy was available; however, she responded well to the arsenicals and bismuth. We have seen no cases of syphilis since.

Vaginitis caused by higher organisms has been comparatively uncommon in our clinic. The few cases of Monilia albicans vaginitis have responded promptly to one percent gentian violet in 30 percent alcohol applied once daily.

Vaginal Bleeding

Vaginal bleeding is usually the result of 1) menstruation, and menstrual variations, 2) trauma, 3) vaginitis with ulceration, 4) spontaneous abortion, 5) tumors of the pelvic viscera, or 6) brain lesions.

Many young adolescent girls come to the gynecology clinic with problems of menstruation.[9] Menarche occurs normally between the ages of 8 and 16 years, the average age for white girls being 11 to 13 years. Negro girls begin on the whole at an earlier age, and Oriental girls at a later age than Anglo-Americans.

Usually, secondary sex characteristics of breast development and axillary and pubic hair precede menstruation by six to twelve months. This gives the doctors an opportunity to condition the child and mother for menstruation, and to allay fears and superstitions where these may exist. Menarche body changes and the onset of secondary sex characteristics preceding the menarche have been described at length and do not require that we dwell on them here. Our concern is with the mild vaginal discharge which precedes menstruation by about a year and the variations of normal menstruation. For about the first year, menstruation is extremely irregular;[11] it may appear for two or three months and stop for several months. Menstruation may be alternately heavy and light, and may last as long as two or three weeks. This unquestionably is caused by the lack of a progestational phase.[9,11] It is most important to reassure both the patient and the parents that this is not at all unusual, correction by medical treatment is usually effective, and surgical interference is infrequently necessary. The girls may need advice at this time in matters of general health such as food, sleep, and recreation. They may need reassurance about carrying on normal activity during the menstrual period, about taking showers, and even about the type of pad to be used.

Precocious Puberty. Advanced development of secondary sex characteristics associated with menstruation may indicate a theca or granuloma cell tumor of the ovary.[2,6,12,13] Urinary estrogen is elevated in these cases. Since these tumors are now considered far more malignant than was previously thought and because they frequently recur on the remaining ovary when unilateral removal is done, total extirpation of the pelvic organs is recommended.[14]

Adrenal cortical hyperplasia or adenoma and pituitary precocity may be evidenced by precocious development,[8] usually with heavy menstruation, and with more marked muscular development and masculine type of hair distribution. Gonadotropin assays are in order, with other studies by roentgen ray;

in this, exploratory laporotomy may be the only successful diagnostic tool. Constitutional precocious puberty is perhaps the most common form.[6,8,13,15] No definite cause has been established for this type of early development. The children are of normal growth and mental age, being unusual only in their advanced sexual development.

Occasionally, a newborn baby girl causes great concern by "menstruating." The mother is reassured, for this is a result of her own hormones and not an evidence of abnormality in the baby.[16] The bleeding stops in the second month of life.

Dysmenorrhea.[17] Painful menstruation may be mainly psychic, a result of the youngster hearing from her mother and older friends of the pain of "those days," and of hearing others refer to the period as the "sick time," and of enjoying a day or two of invalidism which none disputes. These children can sometimes be helped to understand that menstruation is normal, that activity needs to be very little altered, that it is a manifestation of femininity and of readiness for the female role. Unless the mother can also be made more accepting of this same role, however, it is difficult to make much headway.

General health should be improved, and as far as possible the constitutional pain threshold raised.[9,11] There are some physical bases for dysmenorrhea. The syndrome of premenstrual tension, with feelings of heaviness, irritability, and nervousness, which is not fully understood but is associated with fluid and sodium retention, may be considered painful by some. True dysmenorrhea rarely if ever occurs in an anovulatory cycle. Novak and Novak[3] feel that primary dysmenorrhea results from an imbalance of estrogen and progesterone; that the immediate cause is hypercontractility of the uterus with ischemia caused by vasoconstriction followed by vasodilatation of endometrial arterioles; and this produces local ischemia, edema, and congestion. The beneficial effects following estrogen administration are a result of vasodilatation rather than of suppression of ovulation.[11] Conservative treatment is recommended first, which is mainly reassurance, analgesics, proper rest, and moderate exercise. When true primary dysmenorrhea is found, which does not respond to the above treatment, it is wise to eliminate the presence of organic lesions and congenital anomalies of the genital tract such as cervical stenosis; severe uterine hypoplasia; congenital intrauterine webs; congenital uterine septa; and ovarian, intrauterine, and cervical tumors before beginning estrogen therapy.

Amenorrhea. Sudden cessation of menstrual periods has, in our clinic as in those caring for adults, been found to be caused by conception, although this is admittedly not frequent. Less dramatic causes have been secondary anemia, hypometabolism, malnutrition, change of climate, emotional upsets, or systemic illness. Primary amenorrhea, or absence of menarche in a girl 17 to 18 years of age may have local causes: imperforate hymen, atresia of the vagina, absence of the vagina, destruction of vagina or ovaries by neoplasm or other diseases, or agenesis of ovaries.[18]

Endocrine causes may be found with infantile type of uterus and ovaries; absence or decrease in gonadotropic hormone indicative of pituitary disorder; or excess gonadotropic hormone,[19] indicating that the pituitary is functioning but the end organs are not.

One youngster with amenorrhea was markedly overweight and had purple striae, and hypertension; she left the clinic without further studies, but was thought to represent Cushing's syndrome. Arrhenoblastoma, a masculinizing tumor, is associated with amenorrhea. None appeared in our clinic.

Hypothyroidism is sometimes associated with hypomenorrhea; more often, but not seen in our clinic, severe hypothyroidism is associated with amenorrhea.[6,8]

In treating amenorrhea, general health must be improved if debility and fatigue are present. Anemia should be corrected. Thyroid is given (enteric coated) if hypothyroidism is found. Estrogenic substances may be used as substitute therapy. Chorionic gonatropin (A.P.L.) may be used with caution.

Menometrorrhagia. When prolonged and frequent menstrual bleeding occurs that is not within the physiologic norm, it is usually the result of a deficiency of the normal cyclic luteal activity. This may be demonstrated by an abnormal basal temperature curve, and by the neglible quantity of pregnanediol found in the urine. The endometrium becomes hyperplastic and sheds irregularly. Progesterone given orally or parenterally during the second half of the cycle may serve to regulate menstruation until an adequate pituitary-ovarian balance is present. Occasionally, this treatment is inadequate, because of low estrogen; we then combine estrogen with the progesterone. We have never given any type of hormone therapy intravenously, as has been suggested.[16] Moderate doses of thyroid commensurate with age are given routinely for menstrual disorders. We prefer the enteric coated variety of thyroid. This type of treatment remedies the majority of our cases, and we find that surgical intervention is rare indeed. However, when the consensus is that no other avenue of treatment is productive, we do not hesitate to institute whatever surgical procedure is indicated.[9,17]

Our laboratory work consists of blood protein-bound iodine and cholesterol determination, and roentgenograms indicating bone age. Gonadotropin and 17-ketosteroid assays are less frequently done;[19] estrogen determinations are rarely done. We have almost completely disregarded basal metabolic rates, since the results are notoriously unreliable in this age group.

Trauma has been previously discussed with the exception of that caused by vaginal tampons used during menstruation. This results, we imagine, from misuse of the tampon rather than from the application of the appliance itself. However, in our clinic, we discourage the use of vaginal tampons.

Any type of vaginitis which results in ulceration of the vaginal wall will lead to bleeding of various degrees. Treatment corresponds to the underlying pathologic process.

Vaginal bleeding from spontaneous abortion in children, while certainly not common, does occur. Unless the patient is truthful, or remnants of placenta are seen in the cervica os, diagnosis can be indeed difficult. One patient, aged 12½ years, complained of severe abdominal pain [2,13] accompanying a menstrual period. Bimanual and endoscopic examination revealed nothing; the abdomen certainly seemed "acute," and to confound everyone further, she developed a transient anuria. A final endoscopic examination revealed a necrotic portion of placenta protuding through the cervical os. Removal of this tissue caused a prompt regression of the "acute" abdomen.

Tumors of the genital tract have been partially described in the discussion of menstruation. There are as many varieties of neoplasms of the genital tract in children as in adults.[1,2,3,6,12,13,14] In our clinic, aside from the gonadal cell tumors, we have encountered simple follicle cysts of the ovary for which no surgery is done unless bleeding cannot be controlled otherwise, obstruction or pressure symptoms arise from excessive size, or the cyst becomes twisted on its pedicle.[13] One child of 5 years, with intermittent bleeding, was found to have grape-like polypi protruding from the cervical os, fitting the description of sarcoma botryoides.[20] One case of simple cyst of the vaginal wall was not investigated surgically.

Any brain lesion tumor—infection or scar which involves the hypothalamus — may cause vaginal bleeding through precocious menstruation.[13,21] Tumors of the pineal by direct extension or by pressure are the most frequent cause of this syndrome. The exact mechanism of this relationship between the hypothalamus and the pituitary is unknown.

Conclusion

In conclusion, we feel that the field of pediatric gynecology is in an infant stage, and agree with McArthur [11] that the knowledge of the physiology of the preadolescent and adolescent menstrual and reproductive cycle is, itself, in the adolescent stage. Our only opportunity in advancing this much neglected field is in education. This should be begun in medical schools, nursing schools, and departments of public health. These agencies can be educated to overcome the superstitions and mores of a lay public taught to keep the genital tract and its problems "hush-hush."

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II. PSYCHIATRIC POSSIBILITIES

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As in many medical conditions, psychiatric possibilities must be taken into consideration in the differential diagnosis in pediatrics and pediatric gynecology. Cases of chronic pruritus, vaginal discharge, repeated insertion of foreign bodies in the vagina, unusually frequent masturbating, enuresis, a girl who has been raped—all these require psychiatric evaluation. This is needed not only for the treatment of the immediate situation but also for the future mental stability of the child.

The pediatrician is constantly aware that he is dealing with an immature organism going through various psychologic as well as physical developmental stages. More and more, pediatricians consider it part of their responsibility to detect and to help prevent either fixation at particular levels of development, or other emotional problems. An overconcern on the part of the pediatrician and parents, as well as anxiety on the part of the child, about a gynecologic condition, can well serve to give the impetus to an emotional disturbance. Thus, with immediate and sympathetic help by the pediatrician, and further psychiatric consultation as seems indicated, the treatment will include the whole child, instead of concentrating on one area.

This article will include some of the genetic and dynamic psychiatric concepts necessary for an understanding of the emotional problems arising from or causing gynecologic conditions found in children. Other considerations are omitted because of lack of space.

Vaginal Discharge. A vaginal discharge, acute or chronic, may result from one of several causes. Unless produced by repeated insertions of foreign bodies, the cause usually will be entirely physical. The child who repeatedly inserts foreign bodies in the vagina needs further study from the point of view of the undue interest in this area of the body. Such a habit may indicate mental deficiency or psychosis. Psychologic testing and evaluation becomes a requisite here. It may be a form of masturbation. It may be an indication of the child's concern about her sex. Many a small girl begins to compare herself with her contemporaries and feels herself inferior, in comparison, in many ways. She may include her intellectual abilities and her physical abilities, as in gymnastics. Because there will always be someone superior in one area or another, she may decide, usually to a large extent unconsciously, that her inferiority stems from the fact that she is a female. Unable to comprehend her own innate value as a person, as a girl, she may feel that all she needs is the male sex organ to change her abilities. Repeated insertions of foreign bodies may represent her attempts to compensate. Adequate repeated and factual discussions with mother and child may suffice to handle this situation, especially if the child is young.

Treatment of a vaginal discharge may be traumatic when a hostile mother is involved, a mother who is compulsively neat or one who is disgusted by anything pertaining to sex. It may be traumatic if the child already has anxiety about her body and her sex. Discussions with the pediatrician on the part of mother and child may be very useful. The pediatrician will need to communicate that this illness is no more serious than an involvement elsewhere in the body, that the fact that a sexual organ is concerned should be no cause for guilt. He will need to be very clear and emphatic that the child has not brought on the condition by lack of cleanliness or some other act, such as masturbation. He will need to reassure the parent and child that there is no reason to fear serious consequences. The pediatrician's treatment, then, must include an understanding of the parent's and girl's thoughts and at-

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titudes about the latter's condition. He will be in an advantageous position if he has obtained the girl's confidence through his previous contacts with her.

Victims of Rape. Recent studies[1] and psychoanalyses of a number of patients have revealed that the child who has been raped has frequently been party to the act, although most often on an unconscious level. Seduction is often accomplished by a close relative or friend toward whom the child has felt seductive. It may be a case of undue attachment to the father with marked guilt about the feelings, and consequent transference of the feelings to another male. The genetics of the situation can be explained diagrammatically as follows: The usual little girl becomes very fond of her father; this is in the ordinary course of events of growing up. Her love, at first absorbed in the earliest relationship with her mother, shifts to favoritism toward her father. This occurs usually between the third and fifth or sixth years. Ordinarily there would then follow another period of closeness to and identification with the mother. If this latter period is faulty and the child becomes overly attached to the father, she may become guilty about these feelings, particularly if they persist in the latency period and adolescence. Partially because of her guilt, she will shift her feelings to other males, especially ones familiar to her, attempting to gain the love and attention which she felt was insufficiently given by her father.

It is quite clear that the child or adolescent who has been so involved requires help immediately. However, she needs further evaluation to determine the presence or absence of a deep emotional disturbance that chronologically far precedes the eruption of the symptomatology in the seduction. A deep illness should certainly be suspected and a psychiatric evaluation obtained.

Masturbation. Masturbating may begin before one year of age. It may manifest itself in the female by a rubbing together of the thighs and labia with concomitant tension, and flushing of the face. In the older infant, there may be manual manipulation of the clitoris or vagina in the course of the child's exploring its own body. This is the time when the pediatrician will have to distinguish between ordinary curiosity and masturbation. And with the latter, it is necessary to distinguish between masturbating that may exist normally with any child, and the overfrequent genital manipulation that should be considered a suspect symptom.

There is no one underlying cause. It may be a defiance of parental orders. It may follow a period of genital manipulation necessitated by the application of medication. It may be a symptom of the child's lack of satisfaction in the parental relationships, so that there is a turning toward her own body for comfort. There may be still other causes. It can readily be seen from this extremely brief description that treating the symptom will not relieve the condition. Thus, the advice to keep the area especially "clean" may aggravate it by further stimulation. To keep the child "busy" will not help, except to distract her temporarily.

Enuresis. Enuresis is less common in girls than in boys. As in the other conditions discussed, it is a symptom, not a disease entity. It may be the result of inadequate toilet training. It may occur following the birth of a sibling. If the mother reacts restrictively and punitively, the enuresis may become more strongly entrenched as the child finds fewer direct outlets for her rage. As stated by Bettelheim and Sylvester,[2] the child's fear of loss of mother's love "makes symptom formation imperative. The nature of the symptom, however, will depend on the child's developmental status and on the mother's attitude toward the symptom."

Other causes include deep-seated defiance, and castration fears. Every case of enuresis deserves psychiatric evaluation regardless of physical findings. Both psychiatric and physical bases may be found to be present.

Summary

One can see from this brief survey that the psychologic implications of a gynecologic condition in a child or adolescent cannot be overlooked by the pediatrician in his dual role as therapist and practitioner of preventive medicine. He must become skilled in determining diagnostically which of his patients are safe from psychologic ramifications of gynecologic pathology and which are potential or real neurotic problems.

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Cardiovascular Horizons

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IT IS A FAR CRY from Tuffier, who performed a successful aortic commissurotomy in 1912, and Souttar, who, in 1923, completed a mitral commissurotomy via the left auricle, to the expanding cardiovascular horizon of today. Cardiovascular practice has gone a long way even from the epoch-making closure of a patent ductus by Gross and the opening of an artificial ductus by Blalock to relieve oxygen-want.

There was a time when cardiovascular practice was immune from surgical invasion, a Howland could teach that a diagnosis of "congenital cardiac defect" was enough, and the clinician was largely concerned with murmurs and their significance. Cardiac practice was then depressing, but tranquil. Now, all is crescendo bustle and stir.

There is now no phase of heart disease or malformation into which the resourceful surgeon with his busy plans has not obtruded himself, and these are only rumblings of things to come. Cardiology is on the march; a veritable revolution of cardiac thought, methods, and treatment has erupted, a renaissance bright with hope for patient and doctor alike. In this, the surgeon has led and the more conservative internist has been dragged along or driven forward by operating and autopsy table exposures of the inadequacies and errors of our beloved traditional diagnostic methods, methods which are still useful, and are too infrequently used well.

A high standard of diagnosis is the sine qua non for aspiring to the heights reached by surgical skill, and the compelling need of this has pushed forward our study and understanding of many of the aspects of the physiology and chemistry of the circulatory system.

It has also given birth to an incredible number of new tests and techniques on the heels of angiocardiography and cardiac catheterization. These, when added to the ancillary aids upon which the surgeon has built, leave one tired and even a bit winded, but exhilarated.

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Not only can rheumatic heart disease and its exacerbations be prevented, its follow-up more skillfully handled, and its ravages softened, but also all of the mechanical sequelae are boldly attacked by the surgeon with varying degrees of benefit to the patient.

Not only is mitral stenosis "fractured" by the surgeon's finger or his scalpel, but also the accompanying valve deformities, be they aortic or tricuspid stenosis and/or any of the insufficiencies, are tackled at the same or a later time.

The methods of relieving the valve insufficiencies, whether by obstructive devices (now balloons instead of baffles) or by cinching technique (purse string or reefing), give increasing promise of benefit as experience develops.

With the increasing longevity of our people, it is fortunate that vascular progress has kept pace with cardiac progress. Coarctation is repaired at any age from infancy to middle life, aberrant veins are re-transposed to their normal sites, and only complete transposition of the great vessels has defied successful correction. Arterio-venous fistulae are excised routinely with restoration of continuity of both arteries and veins in most cases, and, frequently, complete restitution of the failing heart.

Embolectomy is a time-honored procedure; now recent and organized thrombi are extracted and occlusive arterial disease is treated by thrombendarterectomy. As a rule, the larger the artery and the more localized the disease, the better the results; but the application of this method is not exclusive even of the coronary artery. The best results have been obtained in patients with high abdominal aortic and painful popliteal arterial disease.

Experimental work shows that the vessel is reendothelialized in about ten days, producing an autograft superior to the homologous graft whose fate is uncertain. There are those, however, who believe that the more widely applicable excision of the obstructed area and its replacement by an autogenous graft is the method of choice. Still others bypass the diseased area by an end-to-end, or end-to-side, anastomosing of a parallel artery or vein, somewhat comparable to a dissecting aneurysm.

Many attempts have been made to improve the coronary circulation: clot removal, reconstruction with arterial autografts (successful in animal experimentation in a few cases), arterialization of

the coronary sinus, anastomosis of the internal mammary artery to the coronary artery, and sprinkling asbestos between the layers of the pericardium. None have received wide acceptance.

Aneurysms occur at all ages and in all sites, but especially in the aorta and great vessels. The older methods of fibrogenic wrapping and wiring have been abandoned in favor of replacement. Any part of the aorta or great vessels is amenable to excision. Arterial excision with replacement is especially useful in localized blowouts in the younger age group, in whom the rest of the cardiovascular system is serviceable. The abdominal aortic segment in its entire length from below the kidneys and beyond the bifurcation can be leisurely excised and replaced by a tailored-to-fit heterograft (dried sheep) or a prosthesis, with little danger of spinal cord injury.

The thoracic aortic replacements, though successful even in the branch-bearing areas, carry a greater hazard and are done under hypothermia with ingenious temporary bypass grafts. So lightly do DeBakey and Cooley regard abdominalaortic plastic repair, that they include an appendectomy, cholecystecomy, or gastric resection, if such is indicated.

Not even the tired old veins and their wilted valves are being allowed to sag in peace, but are being attacked in the experimental laboratory.

No sooner was care of the typical ductus comfortably settled than it became clear that there were other kinds of ductus without the characteristic physical signs, and carrying much greater hazard:

a. large left-to-right shunt with pulmonary plethora and pulmonary hypertension. In this type, surgical correction is urgent.

b. right-to-left shunt with pulmonary ischemia and pulmonary hypertension. Here, operation is contraindicated and may be disastrous.

Similarly, the subclavian-pulmonary anastomosis for treatment of tetralogy of Fallot was early challenged by a direct but blind approach through the right ventricle to relieve the pulmonary valve and/or infundibular stenosis. This had the added advantage of preventing a worsening of the stenosis without adding the burden of another shunt. Unfortunately, this carries the grave danger of conversion of a tetralogy to an Eisenmenger syndrome. More recently, there have been developed direct open-heart methods of repair in a nearly bloodless field, by the aid of a variety of devices to reduce the oxygen need of the resting heart, while the cerebral and the coronary, or the total circulation, is carried on extracorporeally. Moreover, there has appeared, as a postoperative complication in a few of the cases in whom the pericardium was opened (for operation or even for cardiac inspection), a sterile, recurrent adhesion-producing pericarditis which adds another obstacle to later, more complete intracardiac repair under direct vision. Hence, it would seem wisdom to use, for such cases as need early relief, the Blalock anastomosis, which can be taken down readily when and if a more extensive operation is undertaken.

The last and the most spectacular conquest has been of the septal defects, approached, literally and figuratively, along a bloody pathway. The diagnosis of interauricular septal defect, easy in adults, is extremely difficult in the young, where its repair is of the greatest urgency. The most exquisite differential diagnosis is necessary between aberrant pulmonary venous return, persistent ostium secundum, foramen ovale, and persistent ostium primum, with or without a valvular defect. Furthermore, the surgeon wishes to know not only the position of the defect, but its size. To achieve this, simple cardiac catheterization, the mainstay of all shunt studies, is not enough. Dye dilution curves and nitrous oxide partition are added to the oxygen and pressure data of catheterization studies. Further, a single or double balloon catheter can be threaded through the septal opening and filled with dye until it cannot be withdrawn from the left to the right auricle. By comparison with angiocardiographic pictures, this device helps determine the size of the opening. The increased oxygen content of the right auricular blood, when the septal defect is completely occluded by the balloon, testifies to the presence also of aberrant venous return. The many methods of repair—invagination using the redundant right atrial wall as a patch, the circumclusion closure method, and the open-heart method using hypothermia—have all yielded good results with reasonable mortality rates.

Interventricular septal defect has been successfully repaired by utilizing the controlled cross-circulation or continuous arterial perfusion from a reservoir of warm, heparinized, arteriolized venous blood to bypass the heart completely. Blood can be obtained in heparinized bottles from the warmed arms of matched donors shortly before operation and kept at body temperature. Coronary flow is selectively controlled by a tourniquet around the aorta at one quarter to one eighth of the normal flow. The heart is then opened and the defect fully repaired. Atrioventricularis communis, persistent ostium primum, tetralogy, and pentology have also been repaired in this way.

Complete transposition of the great vessels, the leading variety of cyanotic heart disease causing in-

fant death, has still defied solution. Early attempts concerned themselves with an intracardiac shunt and partial transposition of the venous return systems to their appropriate auricles. Later attempts have been to re-transpose the great vessels and the left coronary artery using an extracorporeal circuit to bypass the heart. None have yet succeeded.

The extent and boldness of these developments indicate the progress that may yet come and yield convincing evidence of the astounding "will to live" and structural excellence of the damaged or malformed heart, a complete contradiction of the once universally held belief that "when cold steel enters the heart, the soul departs."

SUMMARY

Great surgical advances in all types of acquired and congenital cardiovascular diseases have been made in the past two decades, and the pace has recently been accelerated. This has necessitated revision of diagnosis to much greater exactness, required many new diagnostic and surgical techniques, and has extended investigation into many important collateral fields.

(This is the first in a series of articles by Dr. Purdy on Pediatric Cardiology. A complete bibliography will be published at the end of the series—Ed.)

JANE SCHAEFER, M.D.

Guest Editor

Dr. Jane Schaefer, Guest Editor of Branch Thirty issue of the JOURNAL, was born and reared in Minnesota. As the eldest daughter of a physician and surgeon, her interest and devotion to medicine began in her early years when she accompanied her father on his calls. Her undergraduate work was taken at Western College in Oxford, Ohio, where she received her B.A. degree. She completed her medical training in Michigan, and in 1944 was awarded her M.D. degree from the University of Michigan Medical School at Ann Arbor.

To gain specialized training in obstetrics and gynecology, Dr. Schaefer moved to San Francisco's Children's Hospital and spent three years there, as intern and as resident physician. In 1947, she entered practice with Dr. Gertrude Flint Jones, an established and well-known specialist in San Francisco. Dr. Schaefer was certified by the American Board of Obstetrics and Gynecology in 1953.

This year she is serving as president of the Women Physicians' Club, Branch Thirty, San Francisco. She is also Regional Director for the Southwest (1953-1956) for the AMWA. Active in civic affairs, Dr. Schaefer works closely with Community Chest committees and other community groups. She is assistant clinical instructor, Stanford University Hospital, and is on the attending staff of Children's Hospital where she gives a great deal of her time to clinic and committee work.

Dr. Schaefer's hobby of music gives her not only contact with the music world but also an opportunity to develop and further her own musical talent.

Anomalies of the Genitourinary System

Occo Elain Goodwin, M.D.

TWENTY-FIVE YEARS AGO, few urologists were cognizant of the need for exploration of the field of pediatric urology. Today, most pediatricians, as well as urologists, are interested in the study and treatment of urologic problems.

A few pertinent urologic points to keep in mind when examining a child will be summarized briefly and reviewed, and the most important malformations of this system outlined.

Kidneys. There may be only a solitary kidney or both kidneys may be absent. In the case of the former, one can see the necessity of establishing that fact. Complete agenesis of one kidney always results in a compensatory hypertrophy of the other kidney. This does not become of importance until it becomes diseased. The adrenal on the agenetic side is also absent.

A supernumerary kidney is exceedingly rare. The extra kidney may be above the normal structure but it is usually placed below it. Its ureter may have its own ureteral opening into the bladder, it may end above the bladder, or it may join that of the other kidney on the same side.

An ectopic kidney is misplaced congenitally and usually there are other evidences of anomalous renal development. It may be the only kidney and generally it is lower in position than normal, usually on the same side as its ureteral orifice in the bladder. In this case, it is termed a simple ectopy. If the kidney lies on the opposite side with the ureter crossing the mid-line, it is called a crossed ectopy. The ectopic kidney is usually found deep in the iliac fossa or on the pelvic floor, but it may be found behind the rectum or in a scrotal sac. One should be particularly careful of removing any questionable abdominal mass unless an ectopic kidney has been ruled out. Ectopic kidneys are found predominantly in the female.

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Robbins and Lich* reported a case of congenital thoracic ectopy of the left kidney which gave the patient no symptoms. By excretory and retrograde pyelography, the mass was demonstrated to be a morphologically and functionally normal kidney. Theirs was the eleventh such case reported.

Frequently, kidneys are seen with partial or complete duplication of the pelves. In rare cases, a third pelvis has been observed. Then, too, there may be double kidneys and ureters on both sides; each pelvis may have its own ureteral opening or they may join the other ureter from the same side.

Horseshoe kidneys, disk kidneys, and sigmoid kidneys are examples of fused kidneys. One must always be on the alert to see that they are not overlooked. Perineal pneumography gives good delineation of fused kidneys.

The hypoplastic kidney is an example of an anomaly in size. Its ureter is patent, the excretory function is usually good, but the kidney is incapable of sustaining life without its mate.

Anomalous rotation of malformed kidneys is common, but there may also be abnormal rotation of otherwise normal kidneys, and there may also be a descent of that organ. One of the most frequent anomalies is that of accessory or aberrant blood vessels. These vessels are one of the commonest causes of hydronephrosis. This was recognized as early as 1891, when observations on this subject were published by the anatomical societies of Great Britain and Ireland.

Ureters. Abnormalities of the ureters bear a close relationship to similar anomalies of the kidneys. There may be bilateral absence of the ureters or unilateral absence. A double or supernumerary ureter is a frequent anomaly; the doubling may be complete or incomplete and it may be unilateral or bilateral. One of the bilateral ureters may end

*Robbins, J. J., and Lich, R., Jr., Thoracic kidney, J. Urol. 72: 133-134, Aug. '54.

in the urethra or vagina, making a child incontinent. The child usually has been disciplined severely, sent to a psychiatrist, and so forth, all of which could have been eliminated if a proper urologic work-up had been done.

Bladder. There may be anomalous intravesical termination of the ureter with intramural stenosis, intravesical cyst, diverticulum or ureterocele. Ureteroceles are more common than is generally conceded. They are sometimes seen to emerge at the urethral meatus and are misdiagnosed as a urethral prolapse.

Anomalies of the bladder include absence, duplication, hourglass bladder, and exstrophy. The last named anomaly is one in which the anterior wall of the bladder and the corresponding portion of the anterior abdominal wall are lacking, so that the inner surface of the posterior bladder wall, partially everted, protrudes on the abdomen. Treatment of this condition is entirely surgical, with a diversion of the urinary stream and a closure of the bladder structure or its removal. It is encountered more frequently in the male than in the female, the rate being about five to one.

There must be included here mention of the patent urachus, urachal fistula, and urachal cysts, all possibilities to be kept in mind.

Urethra. Congenital absence of urethra is rare; but imperforation of the urinary meatus is a common form of urethral atresia, the canal itself being normal. Congenital stenosis of the meatus may be present for several weeks or months before being discovered. Straining or screaming during micturition, or distention of the bladder are the symptoms which usually direct attention to this condition and an immediate meatotomy is then carried out.

Congenital valves of the posterior urethra are the cause of many urinary disturbances. By inducing back pressure, these obstructions cause progressive changes in the upper genitourinary tract and will produce death if left untreated.

True duplication of the urethra with double penes is rare and two complete urethrae in a single penis is also rare, but there may be accessory channels. We have mentioned the ectopic ureteral openings into the urethra.

Hypospadias is the most frequent anomaly of the urethra. It is a malformation of the penis and urethra with the urinary meatus located at some point proximal to its normal situation, but always on the ventral wall of the urethra. The several variations are penile, penoscrotal, scrotal, perineal, and pseudo-vaginal, and are self-explanatory. These are treated surgically.

In epispadias, the urethral opening is found dorsal to its normal position and may be found in both sexes. It bears a close relationship to exstrophy of the bladder and may occur with it. In complete epispadias, the urethra is absent and the bladder communicates directly with the skin.

Scrotum. Malformations of the scrotum accompany anomalies such as undeveloped or unilateral sac with cryptorchidism, bilateral or unilateral. The two sacs and septum develop with the descent of the testicles.

Testicles. Congenital absence of both testicles rarely occurs, and it is rare to find the development of only one testicle. So-called supernumerary testicles usually prove to be small tumors, hydroceles, spermatoceles, and so forth. However, congenital malformation of the testicle is common.

Anomalies of position are of two types: cryptorchidism, where there is a retention of the testicle at some point in its normal descent; and ectopic testis, where there is a displacement of the gland from its normal course of descent. A child is usually given a trial of anterior pituitary-like substance for a short time before resorting to surgery. Hormonal stimulation produces development of the gonads and many times the testes will descend. If this fails, surgery is indicated.

Epididymis. The epididymis may be abnormally situated in the scrotum in relation to the testicle. There may be a lack of the epididymis, the ductuli efferenti uniting to form the vas deferens. Again, the epididymis may be so large in relation to the inguinal canal, it cannot descend. Cases have been cited where the testicle was in the inguinal canal while the vas deferens and epididymis were descended and outside the canal. The blood supply of the testicle is separate from the blood supply of the epididymis and vas deferens.

Conclusion

It is vitally important that the physician be alert to the numerous anomalies which may be present in the genitourinary tract. If these anomalies are discovered early and corrected, the life of the individual may be prolonged for many years.

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The Women Physicians Club of San Francisco

ITS BACKGROUND AND ORIGIN

Anah Wineburg, M.D.

MANY OUTSTANDING WOMEN have had medical careers in the area around the Golden Gate, and have been active in civic affairs as well. The medical women's group known as the Women Physicians Club of San Francisco, which was organized in 1925 and became Branch Thirty of the AMWA, is now comprised of nearly one hundred fifty active members and nine emeritus members.

By 1880, there were two well-established medical schools in San Francisco: Toland Medical College; and Cooper Medical College, which later became a part of Stanford University, a school heavily endowed by Leland Stanford, one of the wealthiest men in early California history. The Toland Medical College had been transferred to the Regents of the University of California in 1872; while it was under their aegis, and soon changed its name to the University of California Medical School, it received no financial support from the University. Dr. Emma Sutro Merritt, who was instrumental in organizing the medical women in San Francisco, decided to attend the Toland School because it was part of the state university rather than to go to the older, more highly rated private school.

In the records of the Women Physicians Club are accounts of Dr. Merritt's experiences on entering the school in 1878. It was a poor school at that time, since its only means of support was derived from moderate fees paid by the students, and classes were held in the old two story house which Dr. Toland had donated, together with the land upon which it stood, when the medical school was founded. She pictures vividly the surroundings in which she obtained her medical training, and where Dr. Lucy Maria Field Wanzer had blazed the trail for women medical students five years previously.

At the entrance on the first floor, there were two small rooms, one of which was the office and the other the professors' coatroom. Between them, the hall led to the single classroom where all of the lectures were given to all of the students at the same time. Freshmen and juniors took the same courses as the seniors. Behind this was the dissecting room. On the second floor was a large room known as the "Green Room," used for examinations and faculty meetings.

There were no examinations required for entrance into the medical school, and no definite premedical requirements, although a few students received some preliminary knowledge of medicine by assisting in a doctor's office. The professors gave their services free, and quizzed the seniors at their offices in the evening. There were no laboratories, no microscopes, and seldom were experiments in chemistry even demonstrated. Dr. Merritt describes the long trek to the county hospital, when students trudged through the muddy streets in the winter, or walked along the wooden fences on the property lines.

There was practically no opportunity here for students to learn obstetrics, since most women were delivered in their homes, and so Dr. Merritt went to La Clinique, a lying-in hospital in Paris, after she graduated in 1881. Later she went to Vienna for more training. There, while two out of every three women in the clinics were dying from puerperal sepsis, she obtained much obstetric experience. While there, she saw the amazing results when the use of copper sulfate as an antiseptic was first introduced on the obstetric service, and she returned to San Francisco a staunch advocate of sterile technique. At her medical school commencement, the speaker had derided the "germ theory" and cautioned the graduates against carbolic acid.

On starting her practice in San Francisco, she became closely associated with the women physicians who had formed the Pacific Dispensary for the Care of Women and Children in 1875—Dr. Charlotte Blake Brown, Dr. Martha Bucknell, Dr. Wanzer, and others—and realized the importance of the assistance and support of other women in medicine. Although it started in a humble way in one rented room, this dispensary had an ambitious program: to provide medical and surgical aid by competent women physicians for sick women and

Dr. Wineburg was Secretary of the Women Physicians Club from 1953 to 1955.

children, to further the advancement of women in the study and practice of medicine, and to establish a training school for the education of nurses. By 1880, the first nursing school west of the Rockies had been established, and in the same year, a resident and intern were trained. By the time the dispensary was moved from its original site to a new two story building where the present hospital now stands, Dr. Brown began to realize her dream of a hospital center for medical women in the West.

As these public-spirited doctors, by hard work, singleness of purpose, and unswerving loyalty to their hospital and to other medical women, developed their unique institution; they also assisted the younger women in establishing other hospital affiliations and their private practices. They gained the respect of the community, and a great spirit of common purpose grew between them. For some years before the Women Physicians Club was formally organized, the group gathered for the purpose of providing aid to some less fortunate medical sister. Usually the meetings were called by Dr. Merritt, and not infrequently the beneficiary was a woman doctor returning from the mission field.

A notable meeting was held on October 11, 1924, when a banquet was given by 60 women physicians in honor of the eighty-third birthday of Dr. Wanzer, the first woman to graduate from a California medical college, and the first to be accepted in the San Francisco Medical Society. The status of these doctors in this community may well be summarized in the following note by the editor of *California and Western Medicine,* May 1925, when the address which Dr. Merritt delivered at that banquet was published. "Women in medicine have come into their own in California to a degree probably not equaled elsewhere. There cannot be, of course, a sex line in the practice of medicine, and all fair-minded persons have long since recognized that fact. That it is a fact in practice, at least in California, was well demonstrated when the American Medical Association was our guest. For that great convention, the women physicians themselves requested to serve on mixed committees rather than have separate committees."

The medical women were being called on by other community agencies more and more frequently to help influence public opinion, so that soon the need to have an organization which would reflect the views of all the women doctors in the area became apparent. Finally, in 1925, the constitution and bylaws were written and the first officers were elected. The object of the Women Physicians Club was to promote social intercouse, inspiration, and a spirit of fraternity among medical women; and, in addition, to work in an organized manner for civic improvement and legislation pertaining to public health. All women qualified to practice medicine by the state board of medical examiners were eligible. In 1932, the Women Physicians Club of San Francisco became incorporated; in 1946, it became Branch Thirty, American Medical Women's Association.

The members immediately interested themselves in community affairs, and used their influence to obtain an adequate budget for care of the sick in the county hospital, of the indigent in relief homes, and of the insane enroute to state custodial care. Other community problems in which this group took action included sanitation regulations, meat inspection laws, improvement of the juvenile detention home, and the appointment of a qualified woman doctor to head the state Department of Social Welfare. Together with the Federated Women's Clubs, they were successful in getting the narcotics bill through the Senate.

When Dr. Wanzer died, she left a sum of money to the Women Physicians Club, the principal of which formed the beginning of the Wanzer Fund, which was used chiefly for scholarships to women medical students and loans to women physicians. It was finally used to finance a careful and extensive survey of the women doctors living in the Bay Area, with particular reference to their use of their medical training. These statistics have been helpful in justifying to medical school admission committees education for more women physicians in the future.

At present, the Women Physicians Club meets at least four times each year. Since 1927, there has been a dinner meeting with the women dentists and the women lawyers each year. Perhaps the most satisfying yearly project is the meeting at which all the women residents, interns, and medical students are entertained, so that they may meet the women physicians practicing in this area and their contemporaries from other hospitals and medical schools.

World Health Organization

A JOINT CONFERENCE held recently in Geneva by the World Health Organization and the Food and Agriculture Organization has decided that international action on food additives is necessary.

As a first step, it recommended uniform methods for evaluating the safety of food additives and formulation of general principles governing their use. In addition, it agreed that the WHO and FAO should collect and disseminate information on pertinent legislation and on the various properties and effects of individual additives, and, further, that they should assist in the co-ordination of investigations in order to prevent overlapping and duplication of research.

Of the classes of additives now in use, the Conference recommended that priority should be given to the work concerning food colors, preservatives, and emulsifiers.

In connection with food colors, it was pointed out that over 2,000 synthetic dyes have been prepared, but only about 80 are currently permitted in foods. There is no internationally agreed list for either synthetic or natural colors, although attempts have been made to obtain regional acceptance in Europe of a list of seven synthetic and five natural food colors.

Preservatives are especially important in tropical areas, where storage presents special problems, and are valuable generally in limiting wastage and deterioration in the world's food supplies. Emulsifiers, on the other hand, are of special significance in bakery products.

The Conference also considered that chemicals unintentionally added to food—for instance, residues of insecticides—merited attention. Stress was laid on the importance of establishing analytical methods for such residues. A special study group is to take up this problem next year.

The Conference was attended by representatives of Canada, Denmark, Egypt, France, Germany, Luxembourg, Netherlands, Norway, Sweden, Switzerland, United Kingdom, and United States. Australia sent an observer.

It was pointed out that recent surveys indicated that in the United States over 800 chemicals have been recommended as food additives, while in Sweden 500 are in use. It was agreed that the potential health hazards in this field are worldwide; that the danger was especially great in highly developed countries which used a greater variety of additives; and that early international action was also necessary because many countries were reviewing their legislation and because laboratory facilities for work in this field were inadequate in most countries.

* * * *

The first international training course for health physicists opened at the Karolinska Hospital, Stockholm, in the Institute of Radiophysics directed by Prof. R. Sievert, on November 14, 1955. It was organized by the Government of Sweden and the Regional Office for Europe of WHO, in co-operation with the national atomic energy agencies of various countries, including the U. S.

The course was directed by Dr. Elda E. Anderson of the Oak Ridge National Laboratory, whose services were made available by the United States Atomic Energy Commission. Lecturers came from the United Kingdom and France, and participants from Belgium, Denmark, France, Federal Republic of Germany, Iceland, Italy, Netherlands, Norway, Sweden, and Switzerland.

This five week course provided training in health aspects of the various applications of nuclear science and was intended particularly for physicists in European countries where atomic energy programs are now in a rapid and comparatively early stage of development. The course also served to exchange experiences among countries where research workers have been concentrating on different aspects of radiation protection.

The job of the health physicist is to see that atomic energy is safe and stays safe. He is to the atomic industrial or research establishment what the safety engineer is to the steel works or the sanitary engineer to the water supply system. Because of the complexities of radiation, he needs a comparatively higher degree of specialization.

The Stockholm course arose directly out of the Geneva Conference on the Peaceful Uses of Atomic Energy and was endorsed by government delegates at the WHO Regional Committee for Europe in Vienna. It represents an important advance toward effective international collaboration in the atomic energy field.

The course included the following topics: general principles of health physics supervision at reactors and radiochemical laboratories; radiation measurement; monitoring methods; laboratory design; safety measures in factories; control of the environment; reactor site selection; and waste disposal.

Further courses are being planned.

AMWA Plan of Work
1955-1956

I. Industrial Medicine
The theme for special emphasis in National and Branch Programs.

II. Scholastic Awards
To women medical students graduating with exceptional scholastic records.

III. Scholarship Loans
An important source of financial assistance for qualified women medical students.

IV. Opportunities for Medical Women
Listings of part time and full time positions open to women physicians.

V. General Fund of the Association
Contributions needed to establish a reserve fund to be used for general expenses of the Association.

VI. Organization and Membership
Need for more members and new Branches urgent.

VII. American Women's Hospitals and Woman's Medical College of Pennsylvania
Contributions are solicited to continue and expand the work of these fine organizations.

VIII. Library Committee and Association Archives
Plans for a new library at the Woman's Medical College of Pennsylvania are progressing and contributions are needed. This building will house, in addition to the existing collection of medical literature, the archives of the AMWA. Historical material is wanted.

IX. International Good Will
To be fostered by hospitality to foreign women students, house staffs, and visitors.

X. Medical Women of the Year
An outstanding woman physician is selected by each Branch to be honored at the Mid-Year Board Meeting.

XI. Essay Contest for Medical Students, Interns, and Residents
Title: "How the AMWA Can Help Me in the Pursuit of My Career."

XII. Upholding the Objects of the Association

American Medical Women's Association

PRESIDENT'S MESSAGE

ANOTHER YEAR has just been born. The last one has gone all too rapidly and many things have been left undone. But here is 1956, a brand new year to think about. What are we going to do with these 366 days? How are we going to spend the precious hours? Each one of us will have a definite plan and each plan will have both virtues and defects.

Let us not forget the plans for the continuation and extension of the work of the AMWA and let us include them in our own plans for 1956. And as we silently promise our support, let us repeat together the Club Woman's Collect, written by Mary Stewart, which so aptly expresses the ideals for which we all strive:

Keep us, oh God, from pettiness;
Let us be large in thought, in
word, in deed.
Let us be done with fault-finding
and leave off self-seeking.

May we put away all pretense
and meet each other face to face—
without self-pity and without
prejudice.
May we be never hasty in judgment
and always generous.

Let us take time for all things;
make us to grow calm, serene,
gentle.
Teach us to put into action our
better impulses, sraightforward,
and unafraid.

Grant that we may realize it
is the little things that create
differences, that in the big things
of life we are as one.

And may we strive to touch and
to know the great, common
human heart of us all, and,
oh, Lord God, let us forget
not to be kind!

Esther C. Manning

High Lights of
1955 Mid-Year Board of Directors Meeting

A program on Occupational Health of Women will be presented as a part of the 1956 Annual Meeting. Representatives of women's organizations will be invited to attend. Watch for further details.

A program of Field Service to increase interest and membership in the Association was approved. Mrs. Lillian Majally, Executive Secretary, will spend a part of her time during the next six months in this work.

The Medical Women of the Year Project will be continued in 1956. Participation will be at the discretion of the Branches.

The Scholastic Awards will be continued. A prize of $100 will be given to each woman who graduates in first place in her class. A citation will be presented to each woman who graduates in the upper ten. One contribution of $100 for this award has been received and another promised. Other contributions are solicited.

The Library Fund Raising Campaign is well under way. Dr. Nelle S. Noble was appointed trustee of the Library Committee to fill the vacancy created by the death of Dr. Bertha Van Hoosen.

Life Memberships will be accepted this year, until June 1956.

The following new Regional Directors have been appointed:
Dr. Alma Dea Morani of Philadelphia for the North Atlantic Region.
Dr. Anita McNeely of Dallas for the Southwest Central Area.
Dr. Grace Sawyer of Woodward, Iowa, for the Northwest Central Area.

The names of the State Directors and of the Junior Branch sponsors will be published in the JOURNAL along with the list of Board members.

Ways and means of increasing interest in the Association were discussed. It is urged that interns and residents be invited to Branch activities.

The lease of the New York office will expire August 1956. Rents in the same building will go up and it may be necessary to move the office. More space is critically needed.

Watch for proposed changes in the Constitution and By-Laws which will be published in the JOURNAL and will be voted on at the June meeting. The Branches will receive further directives about these changes.

The AMWA endorsed the activities of the World Medical Association in the field of International Health.

The AMWA has been asked for an opinion about the drafting of women physicians into the armed services. The Legislative Committee will prepare a report which will be sent to the Branches for consideration before the Annual Meeting.

The effect of certain comic strips concerning doctors and medicine was discussed. Members should be alert to the influence of this material and should register complaints when justified.

The next Council Meeting of the Medical Women's International Association will be held in Lucerne, Switzerland, September 20 to September 24, 1956. The theme of this assembly will be "The Problems of the Married Woman Working Outside the Home, and Their Effects on the Physical and Mental Well-Being of the Family Group." The AMWA has been asked to send answers to certain questions concerning licensed prostitution in this country. The AMWA approved the emblem which was presented at the Gardone, Italy, meeting to become the official emblem of the International Association.

The AMWA expressed its gratitude to Dr. Maude Glasgow for her interest and generous financial support of the work of the Association.

The AMWA voted to accept the kind offer of Mead Johnson & Company to entertain us with a cocktail party at each Annual Meeting.

Good Service Carried On

AT THE MOST RECENT MEETING of the board of the American Women's Hospitals, the following letter from Leonard K. Elmhirst, Dartington Hall, Totnes, Devon, England, was read:

Dear Dr. Lovejoy,

"Thank you for your letter of 6th June. If it is any help to you, my wife and I should regard it as a privilege still to be associated with you in any work you undertake. We have never forgotten our experience together and the visit we paid to your hospital. As a result of our discussion with you, a recommendation has recently gone in to the Government of India to set up training courses for village women, modelled on the one we saw at work under yourself. The Report of our Commission of four has been accepted by the Government of India and by the Ford Foundation, who have agreed to help towards implementing it.

"There are two women doctors in India who are both attempting something of the same kind, of whom you perhaps know: Dr. S. Ramachandran, Gandhigram, Madurae, and Dr. Soundram, Lady Health Officer, Patna.

"With best wishes to you and all your work from us both,

Yours sincerely,

Leonard K. Elmhirst."

The fact that the work established at Greece so many years ago is now being carried on in India through the good offices of Mr. Elmhirst in cooperation with other powerful agencies was particularly pleasing to the board members, and it was felt that in other localities, too, the work of the AWH has great possibilities as a demonstration of what can be done with small funds that are properly administered.

Announcing

$100 CASH PRIZE

To the woman medical student, intern or resident who writes the best essay on the subject, *How the American Medical Women's Association Can Help Me in the Pursuit of My Career*

Second Prize—$50

Third Prize—$25

The Object: One of the most important functions of the AMWA is to aid women medical students and to assist women physicians in postgraduate work

We Want to Know: What your problems are
How we can help
Where we succeed and where we fail in our efforts to make the study and practice of medicine easier for you as a young woman physician
Be honest in your evaluation
Criticize where necessary
We can swallow a pill—with or without sugar coating

To Participate: Write an essay of 100 to 500 words on the above subject
Send before April 1, 1956, to
Ruth Hartgraves, M.D.
American Medical Women's Association, Inc.
1790 Broadway, New York 19, N.Y.

Prizes will be awarded in June 1956

RUTH HARTGRAVES, M.D., *Chairman*
Essay Contest

Medical Women's

1956 Interna

An International Tour is being arranged in conjunction with the MWIA Council Meeting which will be held in Burgenstock, Switzerland, from September 21 to 24, 1956. The Tour will visit the Scandinavian countries (including Iceland and Finland), Western Germany, Switzerland, Alsace-Lorraine, and Luxembourg. If circumstances permit, an alternative itinerary to include Moscow and Berlin can be arranged. Although much ground will be covered, the trip will not be arduous, since most of the travel will be by special bus; which will eliminate the bother of meeting train schedules, the nuisance of baggage transfer, and other travel annoyances. Travel by bus also permits visits to many places which cannot be included on train routes, and allows the travelers to see more of the native countryside. There will be a courier to manage accommodations, customs, visas, and similar necessary details.

The Tour begins on August 31, 1956, with flight from Idlewild, New York, via Icelandic Airlines to Reykjavik, Iceland (1), for a day of sight-seeing and a night in the Arctic Circle; then by plane to Oslo and a four day trip through the Norwegian fjords (2) by boat and special bus; across Sweden to Stockholm; from which the Tour will proceed to Turku, Finland, by overnight boat, by bus to Tampere, and a boat ride on the "Silver Route" to Aulanko for the night; the next morning to Helsinki (3) for two days, then back to Stockholm by overnight boat and a day of sight-seeing; thence by boat train to Denmark and Copenhagen (4). From this point on, there will be a special bus which will transport the Tour members to Lucerne, Switzerland, by way of Hamburg (5), Hanover, Cassel, Frankfurt, Heidelberg, Baden-Baden, the Black Forest, and Konstanz, stopping for meals and overnight at interesting spots along the way. After Konstanz, the Tour will continue by bus to Zurich and Lucerne, arriving on the evening of September 20 for the MWIA meeting at Burgenstock the following day (6).

International Association

tional Tour 1956

After the Council Meeting, the Tour will be resumed with a trip over the Alps to Interlaken, and by special bus along the Lake of Thun to Bern and to Basel. From Basel, it will go through Alsace-Lorraine to Strasbourg and then to Luxembourg, where the plane via Iceland will be taken for the return trip to New York, arriving on the morning of October 1.

For those who prefer to cross the Atlantic by boat, individual arrangements will be made so that the travelers by sea will meet the travelers by air in Oslo. Also, on the return trip, transportation from Luxembourg back to New York via Brussels, Paris (Havre), or other ports will be arranged according to the desires of the individual.

The alternative trip to USSR will begin with a plane trip from Helsinki (September 11) to Leningrad and to Moscow for a two to three day visit; then by plane to Berlin for a day and a night, leaving for Frankfurt by plane to rejoin the group for travel to Heidelberg.

On the Tour, places of medical interest will be visited and meetings will be held with the medical women of the country. Members of the Tour having preferences for special clinics or hospital visits will be put in touch with similar specialists in the country being visited. Final arrangements will depend on the number in the party and on their special interests. Friends and husbands are invited to participate. It will be greatly appreciated by the organizer of the Tour and the agency making the arrangements if those expecting to take the Tour will communicate with us as soon as possible so that we may make the most agreeable arrangements and provisions for individual interests.

If interested, please write for details as soon as possible to Ada Chree Reid, M.D., Past President, MWIA, 118 Riverside Drive, New York 24, New York. The Association for Academic Travel Abroad, Inc., Dr. F. Kaufman, Director, 40 East 49th Street, New York 17, New York, will handle travel arrangements and reservations.

Opportunities for Women in Medicine

FELLOWSHIPS

The Institute of Industrial Health, University of Cincinnati College of Medicine, is offering fellowships in industrial medicine to graduates of approved medical schools who have completed at least one year of internship. Two years are devoted to intensive academic and clinical study in industrial medicine, and the third year is spent in residency in an industrial medical department or in a comparable organization. Stipends for the first two years vary from $3,000 to $4,000, depending on marital status. In the final year, a Fellow is compensated by the organization in which he is completing his training. A one year certificate course, without stipend, is also offered to qualified applicants. Requests for information should be addressed to Secretary, Institute of Industrial Health, College of Medicine, Eden and Bethesda, Cincinnati 19, Ohio.

MEETINGS

The Sixth International Congress of Otolaryngology will be held in Washington, D.C., from Sunday, May 5, through Friday, May 10, 1957. Selected subjects for the plenary sessions will be 1) Chronic Suppuration of the Temporal Bone; 2) Collagen Disorders of the Respiratory Tract; and 3) Papilloma of the Larynx. Outstanding internationally recognized authorities will open the discussions on each of these subjects. Communications of two types are invited: Contributions to the discussion of the selected subjects; speakers limited to five minutes. Original papers; speakers limited to 15 minutes. All communications should be in one of the official languages: English, French, German, or Spanish. Motion pictures will be shown continuously except during the plenary sessions.

There will be both scientific and technical exhibits. For further information write General Secretary, Paul H. Holinger, M.D., 700 N. Michigan Avenue, Chicago 11, Illinois.

* * * *

The American Orthopsychiatric Association will hold its thirty-third annual meeting at the Commodore and Roosevelt Hotels in the City of New York on March 15, 16, and 17, 1956. For further information write Dr. Marion F. Langer, American Orthopsychiatric Association, Inc., 1790 Broadway, New York 19.

* * * *

The Eighth Annual American Academy of General Practice Scientific Assembly will be held in the Washington, D.C., Armory, March 19 through 22, 1956. During the four day scientific meeting, the doctors will hear 26 outstanding speakers discuss important subjects ranging from cardiac emergencies to primary wound repair. They will visit more than 60 scientific and 250 technical exhibits. Included will be two live clinics, a symposium on obstetrics, and an address by Surgeon General Leonard Scheele. For further information write the American Academy of General Practice, Broadway at 34th, Kansas City 11, Missouri.

HEALTH UNIT DIRECTOR

The Texas State Department of Health announces examinations for director, local health unit 1 A. The salary range is from $9,720 to $12,120; some large, metropolitan health departments may pay higher than this range from local sources. Currently these salaries are from $12,000 to $16,000 for entrance to the service. The minimum qualifications are (1) M.D. degree and one year's internship; (2) M.P.H. degree or certification by the American Board of Preventive Medicine; (3) two years of field experience after internship in general public health practice; (4) three years of additional experience in special training, teaching, or practice in preventive medicine and public health; and (5) licensure to practice medicine in Texas. For applications write: Merit System Council, 814 Littlefield Bldg., Austin, or Dr. Henry A. Holle, Commissioner of Health, Texas State Department of Health, 410 E. Fifth St., Austin.

MEMORIAL FUND

Friends of the late Dr. T. Duckett Jones have initiated the T. Duckett Jones Memorial Fund to advance his research objectives. The committee is presently of the opinion that research in rheumatic fever will be given priority by the fund's administrators. Depending on the amount received, a number of awards may be made to represent the philosophy and professional interests of Dr. Jones. Suggestions are welcomed by the committee. Contributions are tax exempt and should be sent to the T. Duckett Jones Memorial Fund, 525 E. 68th St., New York.

FOREIGN AWARDS

The annual prize for Medico-Surgical Cinema (about $290) and various other awards will be given during the last session of the course of "Actualitiés medico-chirurgicals" at the Faculté de Medicine de Paris in March 1956. The awards will be made for only 16 mm. amateur films unpublished,

not subsidized, and not produced by any laboratory or firm. The jury will consider the didactic value of the film as well as its cinematographic quality. Entries may be sound or silent films, in color or black and white. Applications should be sent soon. Films must be received not later than Feb. 20, 1956. For information contact La Presse Medicale, 120 Blvd. Saint Germain, Paris VIe.

COURSES

The University of Pennsylvania is offering a course, "Principles of Rehabilitation," at the Rehabilitation Center, University Hospital, on the following dates: February 6-11, 1956; April 2-7. 1956; and June 25-29, 1956. The course is open to physicians, registered nurses, occupational therapists, social workers, rehabilitation counselors, and others concerned with rehabilitation of the handicapped. Provision for granting a limited number of trainee stipends to eligible persons attending the course has been made by the U. S. Office of Vocational Rehabilitation. Applications for these stipends may be addressed to the Rehabilitation Center, Hospital of the University of Pennsylvania. Philadelphia 4, Pa.

* * * *

A course covering all aspects of the problem of cancer is being offered to qualified surgeons from January 23 through February 4, 1956, by the Post-Graduate Medical School, a unit of the New York University-Bellevue Medical Center. Entitled "The Basic Problems of Cancer Therapy," the full-time course is intended to give to the practicing surgeon comprehensive information on both the fundamentals and the most recent developments in research, as well as diagnosis and treatment of the patient with cancer.

Among other courses to be offered are: Recent Advances in Tuberculosis in Children (clinical observations), a part-time course from January 12 through March 29. Anesthesiology—Endotracheal and Related Methods, a full-time course, from January 23 through 27. Basic Problems of Cancer Therapy (for surgeons), a full-time course, from January 23 through February 4. Gynecological Pathology (for specialists), a part-time course, from January 24 through March 15. Geriatrics, a full-time course, from January 25 through 27. Radiobiology, a part-time course, from January 26 through June 7. Culdoscopy, a course consisting of three two-hour periods, from January 30 through February 3. Endaural Surgery, a full-time course. from January 30 through February 10. Diagnosis and Treatment of Fractures and Dislocations, a full-time course, from January 30 through February 11.

For further information write New York University, Office of Information, New York University-Bellevue Medical Center, New York, N. Y.

PUBLIC HEALTH SERVICE

A competitive examination for appointment of medical officers to the Regular Corps of the United States Public Health Service will be held in various places throughout the country on March 20, 21, and 22, 1956. Appointments provide opportunities for career service in clinical medicine, research, and public health. They will be made in the ranks of Assistant and Senior Assistant, equivalent to Navy ranks of Lieutenant (j.g.) and Lieutenant.

Entrance pay for an Assistant Surgeon with dependents is $6,017 per year; for Senior Assistant Surgeon with dependents, $6,918. Qualified officers are promoted at regular intervals.

Requirements for both ranks are U.S. citizenship, age of at least 21 years, and graduation from a recognized school of medicine. For the rank of Assistant Surgeon, at least seven years of collegiate and professional training are needed. For Senior Assistant Surgeon, an additional three years, for a total of at least ten years of collegiate and professional training and appropriate experience, are required. Entrance examinations will include an oral interview, physical examination, and comprehensive objective examinations in the professional field.

Application forms may be obtained from the Chief, Division of Personnel, Public Health Service, Department of Health, Education, and Welfare, Washington 25, D.C. Completed application forms must be received in the Division of Personnel no later than February 10, 1956.

MEDICAL RESIDENT

A medical resident is wanted because of an illness. There is an opportunity for six months or longer. It is an AMA approved residency, in a 244 bed hospital. Apply to Professor of Medicine, Woman's Medical College of Pennsylvania, Philadelphia 29, Pennsylvania.

PICTURE CREDITS

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Page 42—Courtesy of Dorothy Moore, San Francisco.

ANN PURDY, M.D.

DR. ANN PURDY is an eminent and beloved physician, critical scientist, resourceful organizer, and devoted mother of three young doctors. She was born in 1888 in Waterloo, Quebec. Her struggle to gain an education and medical training began as soon as she announced her desire to go to college; she was told "females don't need an education." Undaunted, she came to the United States to earn money by teaching, which enabled her to enter McGill University as a premedical student. Here her troubles were enhanced by the almost daily hissing and booing of her male classmates, who resented her presence. Despite these handicaps, she graduated as the "Gold Medalist" of her class. Admitted to the Johns Hopkins School of Medicine, she worked in a clinical laboratory, and sold her blood at intervals to pay her way. When the degree of Doctor of Medicine was granted, she stood fifth in her class, and as a result was entitled to an internship at the Johns Hopkins Hospital.

Even in medical school, Dr. Purdy's remarkable energy and gift for leadership were strikingly displayed during the influenza epidemic of 1918. With the hospital and medical school closed, she organized the women medical students into an emergency squad which went out into the homes of the rich and poor alike to provide food and nursing care as well as medical attention to many stricken families. In the course of the harrowing work, at first frowned upon by hospital authorities and forced to be done "underground," Dr. Llewellys Barker, emeritus professor of medicine at Johns Hopkins, heard of her problems in procuring medicine and offered to underwrite any prescriptions which she, as a student, could not dispense.

In 1921, she married Emile Holman, also a graduate of Johns Hopkins, and accompanied him to San Francisco. Here she became interested in diseases of the heart and was placed in charge of the Children's Cardiac Clinic both at Stanford, under Dr. Harold Faber, and at Children's Hospital, under Dr. Rachel Ash. Through her expert and devoted care and careful follow-up studies she attracted a large clientele of cardiac patients. There are many in San Francisco today who may be considered "Dr. Purdy's children." Her pioneer work in the early diagnosis of rheumatic fever and her vigorous efforts to prevent, by proper prophylactic measures, its dire effects on the heart, though disparaged at first by others, proved rewarding. She urged the adoption of angiocardiography and cardiac catheterization for the more accurate diagnosis of congenital cardiac malformations, and secured support for the establishment of a laboratory for special cardiac studies. She also became deeply involved in the work of the newly organized San Francisco Heart Association and became its first woman chairman in 1950.

As clinical professor of pediatrics at Stanford, she was an enthusiastic and untiring teacher, and her clinics on cardiac disease were acclaimed by students and graduate physicians for their clarity. Although now retired from her academic position at Stanford, Dr. Purdy continues her work at the Children's Hospital where her experience and judgment are still eagerly sought.

During World War II, besides carrying on in her overloaded clinics and busy practice, she sparked the local activities of the Committee to Defend America by Aiding the Allies. Because of her energetic interest, she was referred to locally as "the

(Continued on page 44)

News of Women in Medicine

MICHIGAN. Dr. Margaret S. Hersey, for the past four years a consultant in the section of maternal and child health of the Michigan Department of Health, resigned recently to join the staff of the Kalamazoo State Hospital as a physician.

NEW JERSEY. The New Jersey diabetes detection drive took place November 13 through 19, 1955. Dr. Pauline Goger of Flemington was chairman of the Hunterdon County diabetes committee; Dr. Margaret Gantt of Madison, chairman of the Morris County diabetes committee; and Dr. Clara Dailey of Franklin, chairman of the Sussex County diabetes committee.

Seton Hall College of Medicine and Surgery, South Orange, is presenting a graduate medical education program at the Jersey City Medical Center. "Rheumatic Fever and Congenital Heart Diseases," will be given by Dr. Janet S. Baldwin, associate professor of pediatrics, New York University College of Medicine. "Tuberculosis in Childhood," is the subject to be presented by Dr. Edith M. Lincoln, professor of clinical pediatrics, New York University College of Medicine. Dr. Lillian Jacobsen of Montefiore Hospital, New York, will participate in a basic course in radiophysics and radiology.

PENNSYLVANIA. Dr. Alma Dea Morani, associate professor of surgery at the Woman's Medical College of Pennsylvania, and well-known plastic surgeon, received the first Woman's Award of the Order of the Sons of Italy in America at the Bellevue-Stratford Hotel. The award was made at a luncheon for women delegates to the national golden jubilee convention of the organization.

Ernest L. Biagi, secretary of the Order, stated in a letter to Dr. Morani announcing the award that "the committee felt we had too long neglected the fine women who bring credit to the Italian-American heritage, and in particular the miraculous work you perform daily in bringing renewed life to many who might otherwise be handicapped physically and mentally, for the rest of their days."

Although she is the first to receive the Woman's Award, "firsts" and "only woman" titles are not new to Dr. Morani. She was the first woman intern at St. James Hospital, Newark, New Jersey, following her graduation from the Woman's Medical College in 1931. In 1944, she became the first woman member of the American Society of Plastic and Reconstructive Surgery. She is the only woman to study with Dr. J. Barrett Brown, an authority in plastic surgery.

Oral antihistamines are advisable for the establishment of ventilation in patients with sinusitis who dislike or react badly to intranasal medication, said Dr. Emily L. Van Loon, professor and head of the department of otolaryngology of the Woman's Medical College of Pennsylvania, speaking before the twentieth annual congress of the United States and Canadian sections of the International College of Surgeons.

General

Many women physicians participated in the annual meeting of the American Academy of Pediatrics, held in Chicago, October 1 through 6, 1955. Dr. Judith Wood was a member of the equipment committee; Dr. Jeanette Hork and Dr. Elsie Wieczorowski were on the information committee. The following presented scientific exhibits: "Oral Electrolytes in Pediatrics," by Dr. Carl A. Gagliardi and Dr. Marjorie R. Stewart, Lynn Hospital and Clinic, Detroit, Michigan; "Prolonged Intermittent Steroid Therapy for the Nephrotic Syndrome," by Dr. Ruth Strang and others of New York Medical College; "Reticuloendothelioses in Childhood," by Dr. Harold W. Dargeon and Dr. Lois Murphy, Pediatric Service and Children's Tumor Registry, Memorial Center for Cancer and Allied Diseases; Dr. Jerome Glaser and Dr. Marilyn F. Smelzer, "Seborrheic Dermatitis and Atopic Dermatitis in Infancy and Childhood"; "Seizures," by Dr. Ruth W. Baldwin, University Hospital, Baltimore, Maryland; "Neonatal Mortality Study—Philadelphia Plan," by Dr. Norman Kendall and Dr. Elizabeth Kirk Rose, neonatal study committee of the Philadelphia County Medical Society in co-operation with Philadelphia Pediatric Society and the section of maternal and child health, Philadelphia Department of Public Health; and the exhibit by Dr. Samuel P. Bessman and Dr. Kathryn McGrady, "Saliva Chlorides in Fibrocystic Disease."

Among those presenting papers at the general sessions were: Dr. Gladys Boyd, associate professor

of pediatrics, University of Toronto, "Solid Masses in the Chests of Children." Dr. Edith M. Lincoln and Dr. Charlotte B. Marker discussed "The Status of the Treatment of Tuberculosis During Various Manifestations of the Disease." A paper in the symposium on Juvenile Delinquency was read by Dr. Adelaide M. Johnson, professor of psychiatry, University of Minnesota, Mayo Clinic, Rochester, Minnesota.

Dr. Emma Sadler Moss of New Orleans' Charity Hospital became the first woman in the United States to head a major professional medical society when she was installed recently as president of the American Society of Clinical Pathologists in Chicago. A nationally known expert in parasitology and the study of fungus diseases, Dr. Moss has a fascinating personal medical record. Born in Pearlington, Mississippi, she started life as a 3 pound baby in a cotton-lined shoebox beside an open fireplace. Since then, she has overcome rabbit fever, acute gangrenous appendicitis, peritonitis, lobar pneumonia, and mammary cancer.

ANN PURDY, M.D.

(Continued from page 42)

British War Office." She was also vice-chairman of the Nutrition Council. During the war, she was active in Russian War Relief, believing that having accepted the blood of Russia's millions of war dead, thereby saving our own boys, we should have the courage to acknowledge our indebtedness and to extend the hand of friendship.

As the wife of Emile Holman, and in her role of hostess for the chief of the department of surgery at Stanford, she was noted for her warmth and cordiality and for her faculty of gathering interesting people in their home. During the war, Dr. Holman's four years of service in the Navy increased her parental responsibilities to their three sons. "Her immortality, if such there be," says Dr. Holman, "is in the dedication to service instilled in her three sons, now also doctors of medicine, who have inherited her sense of deep devotion to her patients, and her abiding faith in the universal fraternity of man."

—Jane Schaefer, M.D.

THESE WERE THE FIRST

Dr. Lillian Farrar, graduate in 1896 from the Cornell University Medical College, studied for several years in the clinics of Vienna. She was the first woman physician appointed chief of clinics, gynecology, at the Cornell University Medical College and was instrumental in having women appointed as interns at Bellevue Hospital. Dr. Farrar was the first woman assistant attending surgeon and later full attending surgeon at the Woman's Hospital in New York, and was the first to be appointed as governor in the American College of Surgeons, where she served three terms. She also was the first woman to give an address before the Clinical Congress of Surgeons, Montreal 1920, the first to hold a "day clinic" in the clinical congress at Detroit, and the first to be a Fellow in the American Gynecologic Society, in 1912.

Dr. Harriet Iler Skemp Nystrom, formerly of Clayton, Michigan, graduated from the University of Iowa College of Medicine in 1926, is said to have been the only woman physician in Ethiopa in 1936, and was superintendent of a leprosarium near Addis Ababa.

Dr. Salome Amy Stout of Hunterdon County, New York, graduated in 1857 from the Eclectic Medical College of Cincinnati, Ohio, and practiced for some time in New York. In 1868, she married Dr. Hiram Peterman and they established "The Consumptives' Home" in Marshall, Michigan, the first institution for the care of tuberculous patients in that state. Dr. Stout died in 1891.

Dr. Amelia Wilkes, graduate in 1854 from the New York Hygeia Therapeutic College, was the first woman physician to practice in Brooklyn, New York. Among her ten children was Dr. Mary Lines, graduate of the University of Michigan, 1887.

Dr. Mary E. Carleton, of Clinton, Massachusetts, graduated in 1886 from the Syracuse University Medical School, and the following year went to China where she established clinics and did eye work at Magaw Hospital, Foochen. Later she went to the Mintsing district and established a hospital at Lek-du where she met many difficulties. Dr. Carleton and her assistants served a district of 200,000 people.

—Elizabeth Bass, M.D.

EDITORIAL FORECAST

February 1956

The February 1956 issue of the JOURNAL will represent a variety of interests both in its scientific articles and its Association news.

"Effect of Chlorpromazine Premedication on Anesthesia and Postanesthetic Symptoms," by Eva Goddin Cutright, M.D.

"Intestinal Obstruction in the Newborn," by Benjy Frances Brooks, M.D.

"Tuberculosis in Children," by E. M. Wynen, M.D.

There will be a report from the Legislative Committee on a conference on medical legislation conducted by the American Medical Association in October 1955. The conference served to present and inform the medical profession on national legislation of importance to medicine to be acted on in the next session of Congress; and obtained individual ideas and attitudes toward the American Medical Association legislative program.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC.

APPLICATION FOR MEMBERSHIP

Name ..... Date ....
(Please print as it should appear in the Directory.)
Address (Present) .....
Address (Permanent) .....
(Please check address to which JOURNAL and AMWA correspondence are to be mailed.)
Medical School .....Year of Graduation .....
Licensed in County .....State .....
Specialty .....Certification by American Board of.....Year....
Date and Place of Birth .....
Medical Society Affiliations .....
.....
.....
Hospital and Faculty Appointments .....
.....
Public Health, Government, or Industrial Appointments .....
.....
.....

Check membership desired:

☐ Life-Dues $200 (May be paid in two installments in two consecutive years).

☐ Active-Dues $10 per annum. (Branch dues not included in Active membership dues and are payable to Branch treasurer.)

☐ Associate-No dues. ☐ Junior-No dues.

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CONSTITUTION OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC.

Article III, Section 1a. **Active Members** "shall be members of a Branch, if any local Branch exists; if not, they may be Members-at-large."

Article III, Section 6. **Associate Members** "shall be: (1) Medical women in the first year of practice; (2) women interns, residents-in-training, and fellows. Associate members shall not pay dues and shall have all privileges of memberships, except voting, holding office, and membership in the Medical Women's International Association."

Article III, Section 7. **Junior Members** "shall be members of Junior Branches in the four undergraduate years of medical school."

All members receive the official publication, the JOURNAL OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION. Life and Active members receive membership in the Medical Women's International Association.

Signature.....

Endorsers are required only if applicant is NOT a member of a State or County medical society. Endorsers must be members of American Medical Women's Association.

Endorser: 1. ..... Address.....

2. ..... Address.....

Checks payable to the American Medical Women's Association, Inc. must accompany application. Mail to Treasurer, A.M.W.A., 1790 Broadway, Room 409, New York 19, New York, or to Branch Treasurer.

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Ulcer protection that lasts all night:

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Each tablet contains:
Methscopolamine bromide ..... 2.5 mg.

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One tablet one-half hour before meals, and 1 to 2 tablets at bedtime.

Supplied: Bottles of 100 and 500 tablets

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Each 5 cc. (approx. 1 tsp.) contains:
Methscopolamine bromide ..... 1.25 mg

Dosage:
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Supplied: Bottles of 4 fluidounces

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Each cc. contains:
Methscopolamine bromide ..... 1 mg.

Dosage:
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*TRADEMARK, REG. U. S. PAT. OFF.—THE UPJOHN BRAND OF METHSCOPOLAMINE

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Past President: Dr. Ada Chree Reid, 118 Riverside Drive, New York 24, U.S.A.

Hon. Treasurer: Dr. H. de Roever-Bonnet, J. van Eyckstraat 8, Amsterdam, Holland.

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Dr. Inger Haldorsen, Rikard Nordraksgm 4, Bergen, Norway.

Dr. Anna Jacob-Peller, 23 Mazastr, Tel-Aviv, Israel.

Dr. Fe del Mundo, 34 Kitanlad, Quezon City, Manila, Philippines.

Dr. Anna Walthard-Schaetti, Eierbrechstr. 71, Zurich 7, Switzerland.

Dr. Marion Hilliard, 716, Medical Arts Bldg., Toronto, Canada.

* * * * *

National Corresponding Secretary to the Medical Women's International Association:

M. Eugenia Geib, M.D., 1277 Clinton Place, Elizabeth, New Jersey.

1956 ANNUAL MEETING

June 7-11, Chicago

Room Reservation

Mr. Paul R. Moyer
Reservation Manager
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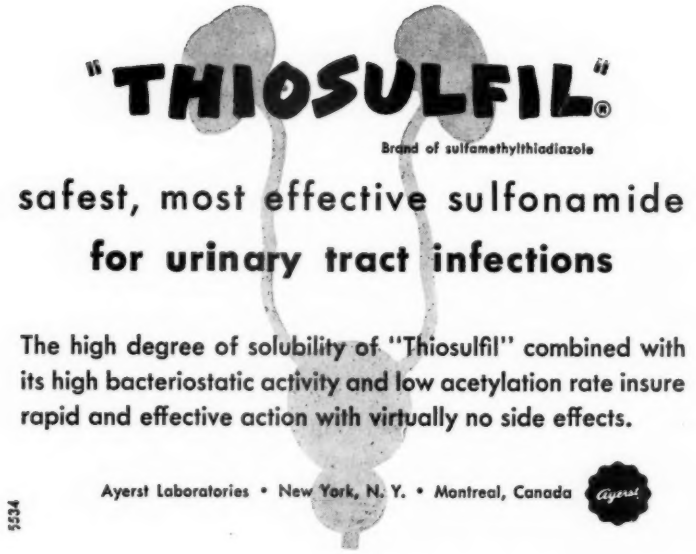

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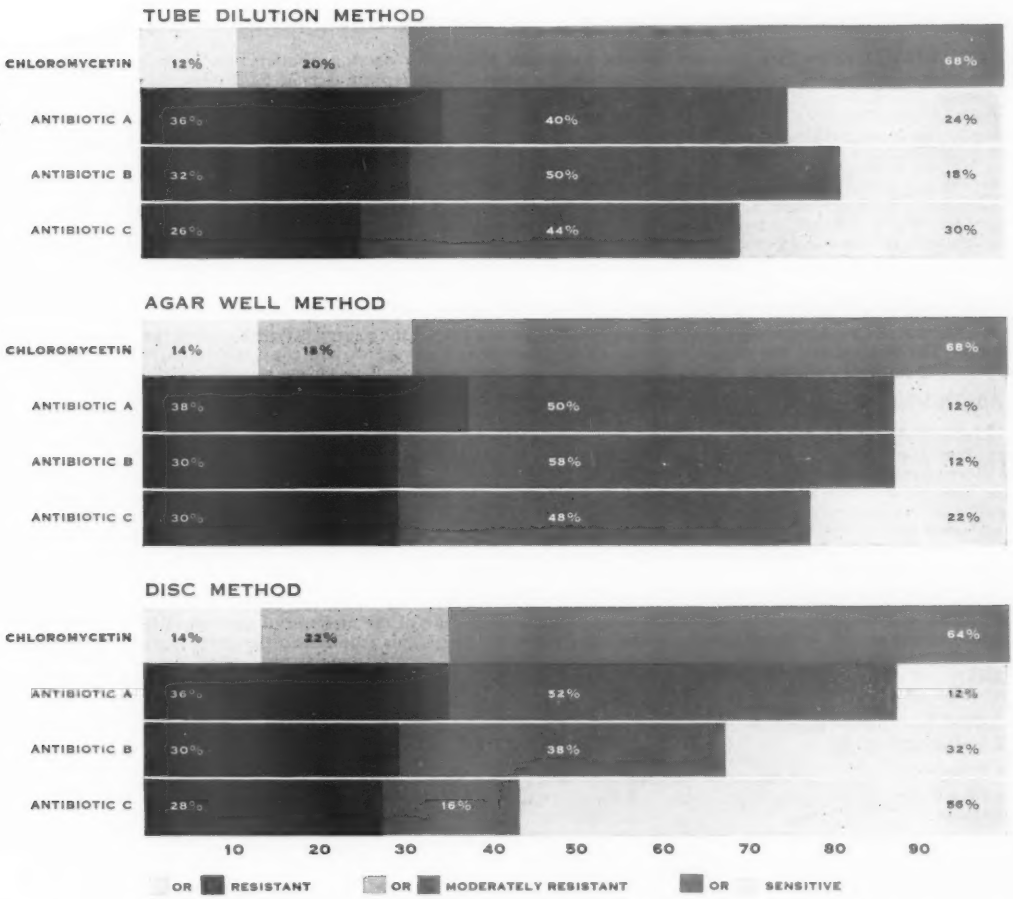

*Breakdown of gram-negative bacilli—Coli: 11; Proteus: 10; *Klebsiella pneumoniae:* 9; Aerobacter: 7; Pseudomonas: 7; Achromobacter: 2; Paracolon: 2; *Salmonella typhosa:* 1; *Bacterium anitratum:* 1. Adapted from Branch, A.; Starkey, D. H.; Rodgers, K. C., & Power, E. E.: Antibiotics Annual, 1954-1955, New York, Medical Encyclopedia, Inc., 1955, p. 1125.

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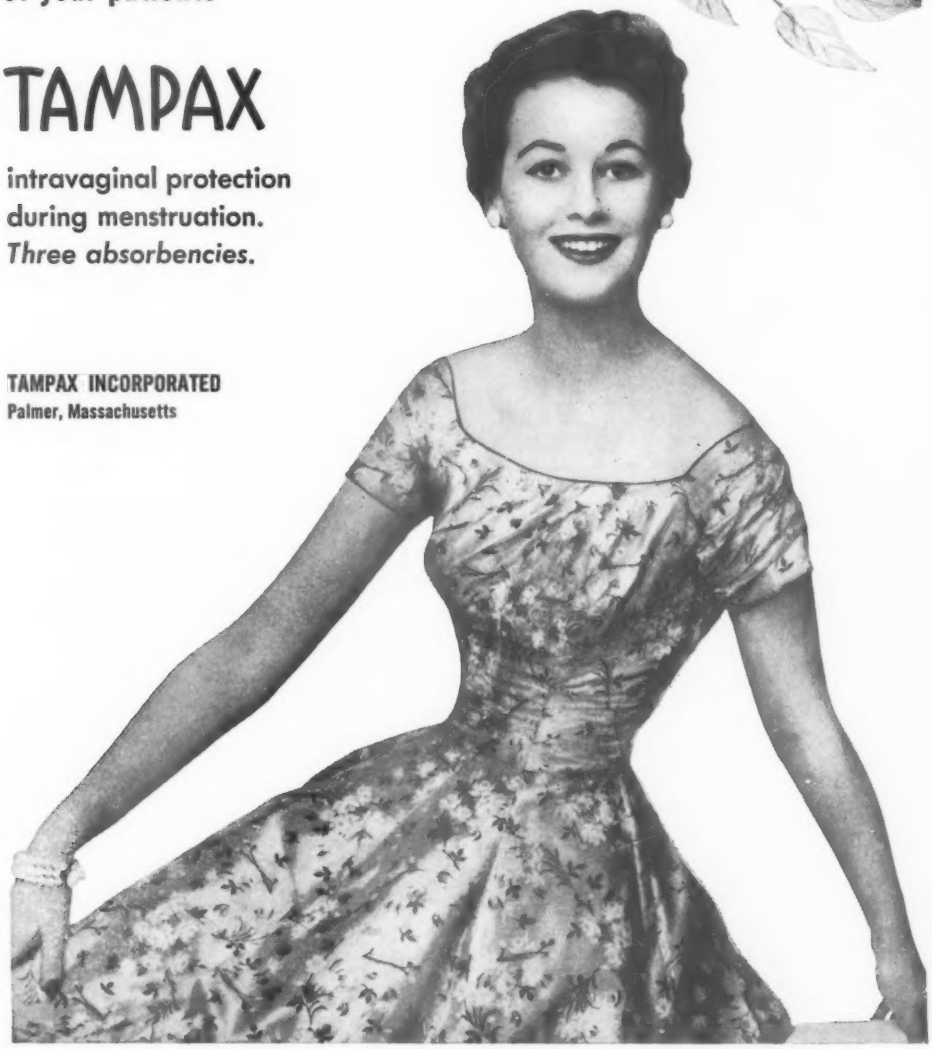

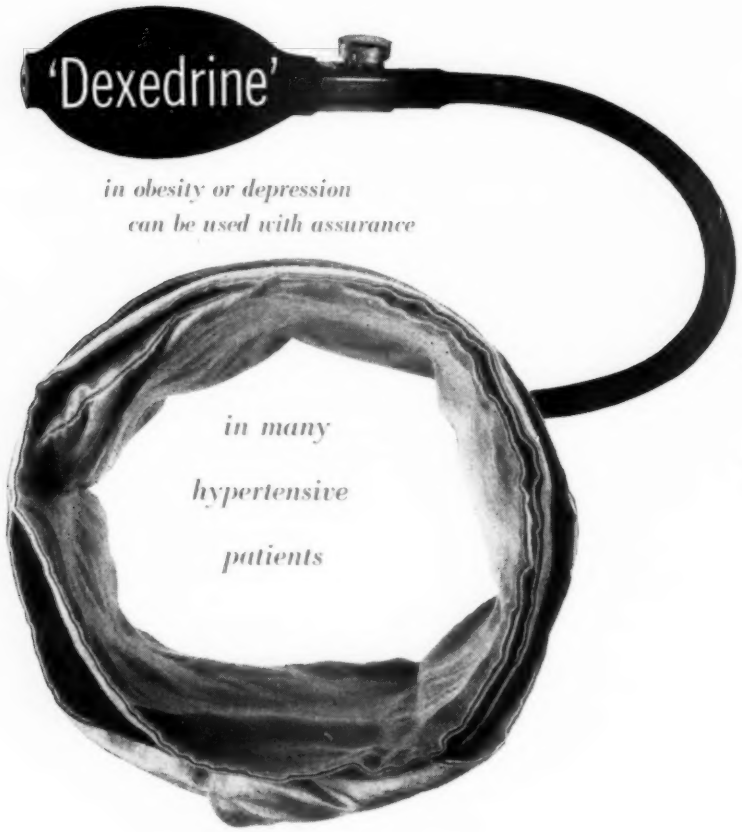

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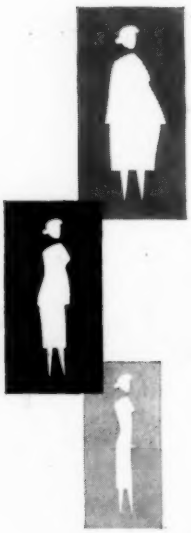

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